

# AMERICAN ARTISAN and Hardware Record

Vol. 81. No. 17.

620 SOUTH MICHIGAN AVENUE, CHICAGO, APRIL 23, 1921.

\$2.00 Per Year.

## "HOME COMFORT"

*THERE ARE NO BETTER*  
**Warm Air Heaters**

**T**O heat the home comfortably is the main requirement of a warm air heater. Comfortable heating means more than the furnishing of an abundance of circulating humid warm air.

It means comfort in ease of operation—comfort because of low fuel consumption—comfort in securing *clean*, warm air.

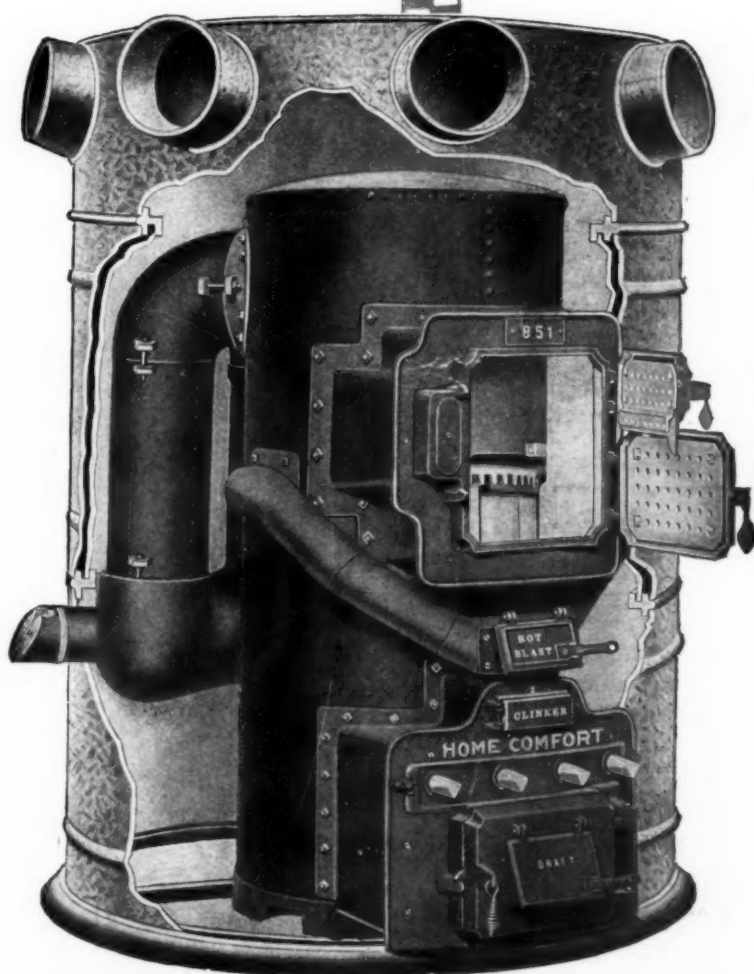
The all steel air-tight construction of the Home Comfort Warm Air Heaters is one of the big reasons why they so amply fill the above requirements.

If you will let us send you our latest catalog we will be glad to give you complete detailed description of their construction.

*Write today for catalog, prices  
and information concerning  
our agency for your territory.*

**ST. LOUIS HEATING COMPANY**

2400-06 Coleman St., St. Louis, Mo.



# They Meet The Test



Clark Jewel oil stoves will back up with satisfactory performance the high standard of service for which they are made.

They can be tested in every point and will be found exceptionally well made.

Test one out yourself, see how perfectly it works—how simple it is to operate, you will be pleased with its wonderful accomplishments.

They save time. They save oil.

Our catalog, number 112, will be mailed you promptly upon request.

**GEORGE M. CLARK & COMPANY**

Division American Stove Company  
CHICAGO

## FRONT RANK

TRADE NAME REGISTERED

*"Living up  
to its name"*

NOW—and for thirty  
years past.

*Our dealer selling co-operation  
for 1921 is complete in every way.  
It will get sales for you. Write  
for catalog and prices today.*

WHEN you compare feature for feature you will find that this steel furnace has no point in construction or operation that can be made a weak spot in your sales argument. You want to sell a furnace that is absolutely gas and soot proof—one that gives your customers clean, economical heat—a furnace that won't warp or buckle. You want to sell the

**FRONT RANK**

TRADE NAME REGISTERED

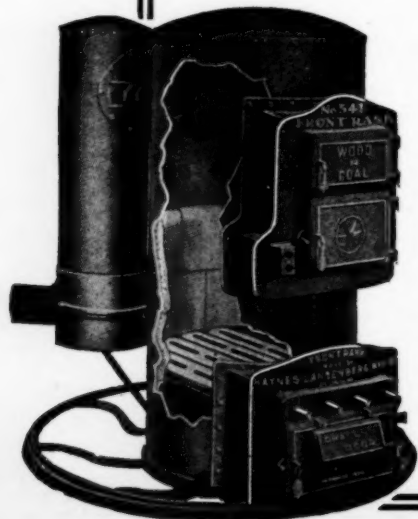
**Steel Furnace**

Its radiating surface is exceptionally large. It is made of tested metal, cold riveted heavy steel plate. It is fool-proof—always in order. The furnace that gives you not only good profits but safe profits. *Ask about our agency NOW.*

**Haynes-Langenberg Mfg. Co.**

4058 Forest Park Blvd.

St. Louis, Mo.



FOUNDED 1880  
BY  
DANIEL STERN  
Thoroughly Covers  
The Hardware, Stove,  
Sheet Metal, and Warm  
Air Heating and Venti-  
lating Interests

# AMERICAN ARTISAN and Hardware Record

Address all communications and  
remittances to  
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AND  
HARDWARE RECORD  
620 South Michigan Avenue  
Chicago, Illinois

PUBLISHED EVERY SATURDAY BY ESTATE OF DANIEL STERN

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Vol. 81. No. 17.

CHICAGO, APRIL 23, 1921.

\$2.00 Per Year.

At the recent annual convention of the Oregon Retail Hardware and Implement Association, J. G. Bennett of Vancouver, Washington, made a suggestion which ought to be generally adopted. He advocated the use of the term "automobile hardware" in place of such expressions as "automobile accessories" and "automotive equipment."

## Automobile Hardware

Jobbers and retailers could easily combine to give wide currency to the term "automobile hardware" by employing it in their catalogs, correspondence, speech, and advertising. The effect would be gradually to establish in the minds of the people an association of ideas which would lead them naturally to think of the hardware store as the source of supplies for automobiles.

♦ ♦ ♦ ♦ ♦

Automobile sales have been notoriously bad ever since last Fall—for some companies.

## Why Did These Two Make Gains?

Since December 1, 1920, however, there was a sort of division established: Some companies continued to show great loss of business as compared with the first months of 1920.

A few reported small gains.

Two companies show gain in sales for their Chicago branches amounting to \$163,678.48 and \$322,874.26 respectively for December, January and February as against the corresponding months of 1919 and 1920.

It may be an accident, of course, that these two concerns made such large gains, but it should be kept in mind that in both cases the make of the automobile handled had an established reputation for reliability, so it is not a matter of mushroom growth with either of them.

It may also be entirely beside the question

that both of these Chicago distributors were not resigned to the general attitude of "no use of fighting actual business conditions, buyers' strike, no money, etc."

No—Mr. Frank H. Sanders, who sells Franklin automobiles, and Mr. Henry R. Levy, who sells Studebakers, said to themselves no doubt:

"This is going to be a tough year to sell automobiles. There will be less people in the market, and that is one more reason why I must fight so much harder in order that I may secure my share of the business which can be developed."

So they perfected their plans for aggressive advertising campaigns, put real enthusiasm into their sales organizations—no question of cutting down their advertising expenditures, you see.

There were changes, however, in their sales forces:

Mr. Gloomy Gus and Mr. Plenty-of-Excuse were fired and real salesmen employed.

And as a result—better business right now than in the banner year of 1920.

There is business to be made in your locality, Mr. Retail Hardware Dealer.

It may be harder to develop that business now.

But it is there—provided you go after it hard enough.

Waiting for trade to come in will not develop the customer you hope for.

You must go after him. You must show him why he should buy that fence, that hammer, that saw, that stove, that washing machine—now.

And that can not be accomplished by thinking and talking about the low price of wheat or beef.

We have during the past three months cited specific instances of how real merchants have proven to themselves that—



No matter what the conditions, no matter how many factories are closed, no matter how badly off the farmers are—

There is business for the merchant who makes a real effort to get it.

Incidentally—the same applies to manufacturers:

Those who go after business—intelligently, of course—get the lion's share.

That means in your case:

Keep up your advertising.

Put real "pep" into your sales force.

A cancelled advertising contract can not possibly produce inquiries, nor can a salesman do his best when your attitude in general indicates that you don't think you can get any business.

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In the office of Judge Gary, Chairman of the board of directors of the United States Steel Corporation, there is a

**Success Comes** transparent sign with these  
**In Cans** two sentences in large letters:

"It Can Be Done."

"Can't Must Be Overcome."

Judge Gary is an aggressive optimist.

That is why he fills the position of the executive head of the world's greatest industrial corporation.

He is a conservative in some respects, but when it comes to pushing for business, the aggressive portion of his mental make-up occupies the saddle.

That is why the organization of which he is the chief has grown to be the largest of its kind.

The man who gets in the habit of saying, "It can't be done," will never make a success of his business, for the simple reason that he will never be aggressive—and in this day it requires aggressiveness of the highest degree, to make headway against the general conditions, as well as in competition with the other fellow who is fighting for business along the same lines.

Here, by the way, is another saying of Judge Gary's:

"Success Comes in Cans,

"Failures in Can'ts."

The hardware dealer or sheet metal contractor who is doubtful as to whether he ought to prepare for a fair business during the coming business, by his very doubting

places a handicap in his chances for profit this year.

Success does not "come" to a man. It must be diligently sought for and fought for.

And in 1921 there is every reason for seeking diligently and for fighting hard, because unless you do both, with all your might, you stand a mighty good chance of losing whatever you may have gained during the fat years of 1918 to 1920.

Success and progress are the result of healthy, positive, aggressive thinking and acting.

You must plan your selling campaign—carefully, so that no effort will be wasted.

You must make up your mind to go after business in your most aggressive manner.

You will lose many sales—that otherwise would come to you—if you wait for trade to come to your store.

You must go out and make them come to your store.

It can be done.

It is being done every day—in localities just like yours, where conditions are no better than yours.

But it is being done only by merchants who are alive to their opportunities—who, in other words, follow the idea of Judge Gary's: "It Can Be Done, Can't Must be Overcome. Success Comes in Cans, Failures in Can'ts."

◆ ◆ ◆ ◆ ◆

You may be as friendly as a hound pup with the manufacturer or jobber from whom you buy your supplies. But  
**Special** it won't make any difference  
**Favors.** in the price which you have to pay for the goods which you purchase for your store. In other words, friendship does not imply any right or obligation to sell below the current market price.

Because a customer belongs to the same lodge as you do or happens to be a blood relative, or lives next door to you is no reason why you should give him a discount on the things which he buys from you.

The fact of the matter is that business must be conducted on a basis of equal and fair treatment to all, with special favors to none, if you wish to gain and hold a reputation for square dealing and uniformly friendly service. Indeed, true friends never seek favors in business or social relations.



## Random Notes and Sketches

By Sidney Arnold

Bennett Chapple is nothing if not an optimist. He says that an advertising man must be optimistic in



How Nature Provided  
Famous Trademark.

order to do any good for his organization, and I am inclined to agree with him. Incidentally, some of them have not been particularly cheerful during the past six or eight months, because their "big bosses" shut down on their appropriation when the sky began to look cloudy, and now they wish that they had stood by their guns because the fellows who did so are proving that so-called dull times serve to emphasize the fact that it is the man or company that keeps on soliciting business—by advertising and otherwise—gets it. "Ben" belongs in the class of those who wise—who gets it. "Ben" belongs in the class of those who have kept at it right along, and Armco Ingot Iron is being made and shipped in increasing large quantities picking as the saying is.

The illustration which is shown herewith, represents a small stone which was brought into "Ben's" office one day recently while I was visiting with him.

"Well," he said to the youngster who had found it in a sand pile nearby, "isn't that fine! I have always said that nature was on our side, and now I know it, for here is the original cast for Armco Ingot Iron."

It was a hollow sand stone, the upper half of which was broken off, and inside there was a smaller stone, leaving a space between it and the "case," which as you will note resembles very much the famous trademark of the American Rolling Mill Company.

\* \* \*

"I don't know what profession my son should follow," said a lady the other day to Leon D. Nish, Secretary Illinois Retail Hardware Association.

"He's reckless," she explained, "careless, and indifferent to consequences."

"Make him a taxicab driver," said friend Nish.

\* \* \*

Accurate knowledge of general subjects is not as common as it might be, declares my friend Samuel D. Latty of the Kirk-Latty Manufacturing Company, Cleveland, Ohio. He quotes this illustration:

A theater was showing on the screen a picture of a stock exchange. The brokers were hurrying about, pushing, waving their arms, gesticulating and, to the uninitiated, acting like a lot of insane men.

Two young ladies in the balcony watched them with breathless interest for some time, then one asked:

"Why in the world don't they sit down and rest once in a while?"

"My dear," was the enlightening answer, "don't you know that a seat in the stock exchange costs thousands of dollars?"

George R. Carter of Cope-Swift Company, Incorporated, Detroit, Michigan, contributed the following narrative to my collection:

"What's the matter?" inquired the foreman, as he entered the sanctum for copy and noted the editor's bleeding nose, swollen forehead, puffed, red eye, and tattered, dusty coat. "Fall down stairs?"

"No—only that," replied the editor, pointing his finger to a paragraph in the paper before him.

"It's our account of the Crapley-Smith wedding. It ought to read, 'Miss Smith's dimpled, shining face formed a pleasing contrast with Mr. Crapley's strong, bold physiognomy.' But see how it is printed."

And the foreman read, "Miss Smith's pimply, skinny face formed a pleasing contrast with Mr. Crapley's stony, bald physiognomy."

"Crapley was just in here," continued the editor, throwing one bloodstreaked handkerchief into the waste basket and feeling in his pockets for a clean one, "and he—but just send that fool of a proofreader in here! There's fight left in me yet!"

\* \* \*

Occasionally, circumstances are such that there is no need to read the local papers, as in the subjoined case cited by my friend John J. Schneider of the Auto Wheel Coaster Company, North Tonawanda, New York:

"Yes, sir," said the village grocer, "I take the big weeklies to keep track of the world's affairs and the big city dailies to keep posted on what is going on in this country."

"But don't you take your home paper?" asked the drummer.

"Nope."

"But you certainly ought to feel interested in local affairs."

"Oh, I know everything that goes on. My wife belongs to the woman's club and three societies, one of my daughters works in the millinery shop and the other is in the delivery window at the postoffice."

\* \* \*

Apart from any theories of faith or psychology, it is a fact that all misery and trouble are relative. We intensify misery by dwelling upon it and double trouble by permitting it to invade our imagination and grow fat upon worry. Indeed, it may be said with full truth that "as a man thinketh, so he is." We are the architects of our own disposition, and it rests with us what materials we choose to build into the structure of our character. Here are some cheerful verses on the subject:

### It's All in Your Eye.

When life is depressing and gloomy and sad,  
When everything's indigo blue,  
When chance that's ill-favored and luck that is bad  
Seem both on a still hunt for you,  
It looks as if fortune had treated you mean  
And twisted your prospects awry,  
In fact, the whole project is plain to be seen—  
But maybe it's all in your eye!

The way is deep shadowed and tortuous, too;  
You feel that you can't take the plunge,  
No glimmer of sunshine appears to your view;  
You're ready to throw up the sponge.  
But pluck up your courage, my myopic friend,  
Square shoulders and never say die;  
Just stick to your colors and stick to the end—  
For, maybe, it's all in your eye!

# Up-to-the-Minute News Siftings

*Items of Interest to Dealers Gleaned from Many Fields.  
National and Local Business Plans, Problems, and Practices.*

## **DECLARES THAT BUSINESS IS GENERALLY IMPROVING.**

An indication that business conditions throughout the country are getting better is found in the fact that the volume of distribution by jobbers and retailers showed a distinct gain in March over February, says Archer Wall Douglas, Chairman of the Committee on Statistics and Standards of the Chamber of Commerce of the United States. Mr. Douglas reports at length on the business situation in the May number of *The Nation's Business*.

The whole tone of Mr. Douglas' report is optimistic. He points out many signs as indicative of an improvement in the situation, and as tending to foreshadow a return to more settled and stable conditions. Some of the most striking points in Mr. Douglas' report are:

"The most significant, and possibly most cheering feature of the situation is that the automobile business seems to have been not dead, but sleeping. There is a resumption of operations in a modest way by some factories which were shut down, but which now have orders in hand. Also there is increasing sale for used cars.

"There is a better demand for lumber and prepared roofing and paint because of somewhat more building and construction. There is more building going on in the cities than in the country, and there will not be much construction of any description on the farms until another harvest has shown the farmer where he stands.

"Manufacturing is running mostly on short time. In the shoe trade, the demand for women's shoes is much better proportionately than for men's footwear.

"Excessively high railroad rates are one of the serious handicaps of the situation, while they likewise fail in their original purpose of providing adequate revenue for the roads. They are prohibitory in their effects. In some cases, especially those of early fruits and vegetables from the far south to northern and western markets, the cost of transportation is from four to five times the price received by the producer.

"Winter wheat is in unusually fine condition.

"There will be much less cotton acreage planted this year than last. The crop will receive less fertilizer than last season, but much greater intensive cultivation. There will be more of a diversified crop in the South this year.

"The farmer is economizing as he has never done before. He is making greater use of the horse, and leaving the automobile in the barn. But while he is economizing on some things, he is also buying somewhat more freely, especially the farmer in the grain regions. This is a healthy sign, for the genuine beginning of better times is likely to come from agricultural rather than industrial life."

## **Will Discuss More Economical Distribution of Goods.**

Methods of bringing about more economical distribution of merchandise will be discussed at a special group meeting to be held in connection with the ninth annual meeting of the Chamber of Commerce of the United States at Atlantic City, New Jersey, April 27 to 29.

"Of all distribution problems," said Alvin E. Dodd, manager of the Chamber's Domestic Distribution Department, outlining the program for the group meeting, "the one that has an immediate interest to every distributor is the probable trend of prices.

"In this connection it is interesting to compare the Civil War period with present conditions. After the first violent fall in prices following the Civil War there was a gradual decline for nearly thirty years.

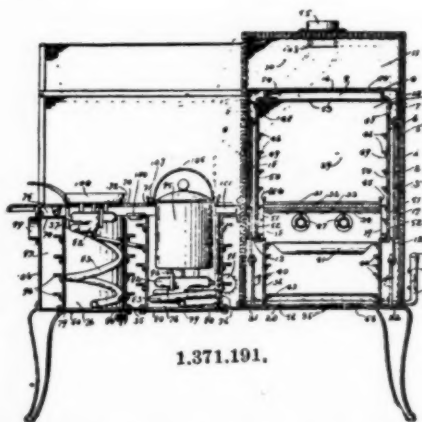
"Study and discussion of this situation will undoubtedly contribute toward making clearer the way in which American business may proceed upon the readjustment now taking place.

"Better marketing facilities is a phase of distribution which will be given considerable attention. Experience has shown that substantial economies can be effected through improved means of marketing and by making greater use of the warehouse.

"Not the least of these is more careful buying to avoid the possibility of over-stocking and this in turn automatically will result in fresher stocks, more attractive to the consumer. Indeed the subject of distribution is so broad that it is somewhat difficult to draw a line beyond which these economies may not extend."

## **Gets United States Patent Rights for Cooking Stove.**

Clarence E. Arundel, Talladega, Alabama, has procured United States patent rights, under number 1,371,191, for a cooking stove described in the following:



The combination with the walls of a stove and with an oven bottom, of a movable oven formed with a top and with side walls, provided with a heat inlet and outlet, an opening, the said opening formed between the side

walls of the stove and the said oven bottom, the said side walls disposed and movable in the said opening.



# Neighborhood Hardware Dealer Builds Up Business of \$30,000 a Year.

*George E. Roesch Started with Capital of \$100 in Store Five Blocks from Business District.*

Five blocks away from the business center of Aurora, Illinois, George E. Roesch conducts a combination hardware store and sheet metal shop.

He started with a capital of \$100.00 and now does a business that runs well above \$30,000 a year.

His stock comprises tools; cutlery; aluminum, enamel and tin housekeeping wares; washing machines; oil and gas stoves; paints, varnishes and brushes; electrical supplies, such as flash lights, sad irons, toasters, etc.; Pyrex baking dishes, warm air furnaces and sheet metal products.

His store is thus typical of the hardware business of the average small town. It is fitted up handsomely with floor show cases and wall cabinets, and is kept as neat as a pin.

In the basement is a well equipped sheet metal shop with power machinery and appliances for welding, blow pipe work and radiator repairs.

Mr. Roesch believes in system. He has a small office, set off with glass partition. Here are found a typewriter which is kept busy preparing special announcements and circulars about new items, a set of record files, a duplicating machine and various other fixtures and appliances for the purpose of keeping track of customers and sources of supply.

"Our business," said Mr. Roesch, "is probably somewhat different from that of the hardware man who is located in the business center of a good sized city, and we do some things here that he most likely would not think of doing.

"For example, we have practically no transient trade or even farmers' trade. Our business comes practically all from the neighborhood in which our store is situated, although we have some customers who live in the other end of town. They have to take a car to get downtown, so they just stay on and come out here, because they have found that we treat them a little bit better than the down-town stores. The telephone helps us a lot, too, and our two delivery trucks make it possible for us to take care of the wants of such customers as 'phone their orders to us.

"We have had quite a remarkable success on flashlights this past year. Of course, in that business, the

big thing is the battery. We sell a flashlight and then every so often there is a repeat sale of a battery. The main point to keep in mind is that if you can sell a hundred and fifty batteries in a month, that is what you ought to buy at a time; then you can always be sure that your batteries are in good condition.

"During the past two years we have developed a considerable business on washing machines, electrical appliances for the home, etc., by means of canvassing. We employ a woman for the purpose, and she has made good.

"Of course, she can't carry heavy samples, but whenever she makes an engagement for a demonstration of a vacuum cleaner, washing machine, or anything of that sort, one of our trucks makes delivery of the appliance and she goes back and makes the demonstration.

"Incidentally, I believe that a woman if properly chosen is better suited for such work than a man—if for no other reason than that it is easier for a woman to get 'inside' than a man, and then, too, she naturally has the viewpoint of the average housewife, so that she can talk with them in their own language, so to speak.

"The great increase in the use of aluminum cooking utensils, by the way, has brought us quite a lot of repair work, because we developed a solder that would

actually solder holes or opened seams in vessels made of aluminum.

"This aluminum solder of ours has been used on all classes of aluminum ware, both cast and spun and has proved absolutely dependable. It can be applied with a regular soldering iron. The only thing you have to be careful about is that your iron must be perfectly clean and be heated to at least 350 degrees, Fahrenheit. Otherwise, it is very simple in application, and we have developed a considerable sale of it to sheet metal contractors and manufacturers of aluminum utensils of many kinds."

It pays to Get the best, Just like it pays to Plant the best seed. The more Abundant results offset the first Seeming saving in cost. An article Cannot do more than its Quality Permits.

## ROESCH'S RULES FOR SUCCESS

1. Keep your stock alive.
2. When an article begins to show signs of going dead, get rid of it, no matter what the loss.
3. Make your word good. The customer is always right.
4. A grouchy refund has killed many a good customer.
5. An active canvass for new customers always pays big returns.
6. Buy as you need. Quantity discounts often change into heavy interest charges.



# Good Ideas for Window Display

*Practical Lessons from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. How to Get More Passers-By to Come into Your Store.*

## CONNECTS WINDOW DISPLAY WITH CLEVER NEWSPAPER PUBLICITY.

Timeliness is always a powerful influence in quickening sales through window displays.

The window exhibit shown in the accompanying illustration was planned and arranged by Herbert W. Farr for Warner Hardware Company, Minneapolis, Minnesota, at a time when an exceptionally clever drama was being played at the Garrick Theatre in Min-

neapolis. The play was called "My Lady's Latchkey," an adaptation from "The Second Latchkey," by C. N. & A. N. Williamson.

At the end of the week the Warner Hardware Company decided to duplicate any make of cylinder key.

As described by Mr. Farr, the color scheme of the window display is gold and French grey.

"The highly colored lithographed center piece is life size," he says, "pasted on heavy board and cut out around the outline. This stood about nine inches from the oval background which was painted gold. The latter was cut from beaver board, and the narrow panels on each immediate side were covered with a figured



Window Display of Keys and Locks Designed and Put in Place by Herbert W. Farr, Display Manager, of Warner Hardware Company, Minneapolis, Minnesota.

neapolis. The play was called "My Lady's Latchkey," an adaptation from "The Second Latchkey," by C. N. & A. N. Williamson.

At the bottom of the Garrick Theatre advertisement in the local newspapers the Warner Hardware Company had an advertisement reading as follows: "My Lady's Latchkey." A coupon entitling "My Lady" to the duplicate (free of charge) of any "Corbin" Latch Key you may need will be given at The New Garrick Theatre to each lady during the week.

Mr. Farr consulted the Manager of the New Garrick Theatre and gained his full cooperation in the matter of distributing the coupons referred to in the newspaper advertisement. Six thousand of these coupons were presented to lady patrons of the theatre during that week. The stunt became so popular that toward

imported wall paper of very strong coloring. The four pillars and two outside panels were covered with French gray oatmeal wall paper and the scroll pieces were painted gold.

"White illuminated globes about eighteen inches in diameter were placed at top of outside pillars. Seven cylinder keys measuring eighteen inches, cut from heavy white card board, were painted gold and silver to resemble actual keys. The floor covering was bright red burlap.

"The wording directly below the center piece reading 'See that your home is fully protected while at the New Garrick seeing Katherine MacDonald in "My Lady's Latchkey,"' caused favorable comment."

The scheme was originated, the sign work and display, all were executed by Mr. Farr.

### **Paint Market Does Not Show Much Change.**

There has been some improvement in the number of small lot orders in the paint material market, but otherwise conditions do not show much change. While buyers are coming into the market more frequently, they appear to be interested only in small lots for regular needs, although the spring demand is expected to result in an early increase in activity.

As far as prices are concerned there are no particular changes to report except that there is a firmer feeling in most quarters of the market.

Barytes continued to move in a routine way and the market is in about the same position it has been for some time. Offerings of blanc fixe are plentiful, but the market does not show much improvement as far as orders are concerned.

Prices for the lead pigments are well maintained and although business is rather quiet, corrodors report signs of more buying confidence on the part of consumers and look forward to a much improved demand within a short time.

Zinc oxide is moving in a routine way on contracts and prices are well maintained.

Lithopone appears to show up brighter than most of the other pigments from the standpoint of increasing business both for carlots as well as smaller parcels, and while prices hold steady it is expected that any sudden increase in the demand would result in sending values to higher levels.

Producers are generally finding a good outlet for all they can manufacture.

While there is no demand for large lots in the dry color market trading is showing some improvement from week to week as far as the number of small orders is concerned.

With the exception of resale lots in some lines prices hold about steady and many interests are of the opinion that the bottom has been reached and that any concentrated call for supplies will result in advancing prices.

### **Gets Competent Man Through Ad in AMERICAN ARTISAN.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Please discontinue our ad in your magazine as we found the man we want through your help.

OLSON HARDWARE CO.

Elkhorn, Wisconsin, April 18, 1921.

### **Hardware Club of Chicago to Give Annual Dinner May Second.**

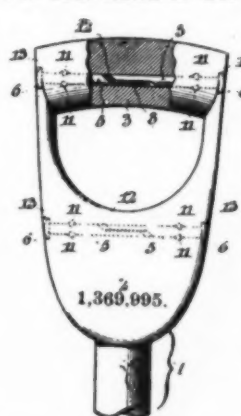
The Annual Dinner of the Hardware Club of Chicago, which is one of the banner events on the social program of this very lively organization will be given on Monday evening, May second, at 7 p. m., in the club rooms, eleventh floor of the State and Lake Building.

H. Walton Heegstra, the well known advertising counselor, will be the principal speaker, and there will be an unusually fine musical program, followed by dancing.

Reservations should be made at once, so as to make certain of accommodation. The charge of \$2.00 per plate is very low, considering the excellent menu and entertainment.

### **Obtains Patent for Stay Bolt for Tool Handles.**

Under number 1,369,995, United States patent rights have been granted to Lewis Edmond Webster, Wyoming, Pennsylvania, assignor to The Wyoming Shovel Works, Wyoming, Pennsylvania, a Corporation of Pennsylvania, for a reinforcing or stay bolt for tool handles described herewith:



A headed reinforcing or stay bolt section having adjacent its head projecting lugs adapted to be embedded and engaged in the structure to be reinforced, and having its end portion opposite the head laterally reduced and serrated along an axial plane with the abrupt faces of the serrations toward the headed end of the section, and chamfered on the reduced side at its extremity; so that a pair of such sections

inserted endwise from opposite sides of the structure to be reinforced will automatically be brought to proper angular relation for interlocking by coaction of their chamfered ends, and that the serrations may interlock securely in divers end wise relative positions of the inserted sections without interference with their movement toward one another by means of the lugs aforesaid when the reinforced structure shrinks.

### **Says AMERICAN ARTISAN Is a Great Help to Tradesmen.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Your valuable journal is a great help to business and tradesmen.

Yours truly,

C. J. WOLF,

Fort Wayne, Indiana, April 15, 1921.

### **Gets Trade-Mark Registered for Asbestos Textile.**

United States Patent Office Registration has been obtained by The Philip Carey Manufacturing Company, Lockland, Ohio, for the trade-mark reproduced herewith. The particular description of goods to which it applies is asbestos textile for waterproofing or fireproofing composed wholly or in part of asbestos, asbestos and rubber, or asbestos and asphalt, or asbestos and woven fabrics, table mats, asbestos cloth, asbestos felt, asbestos ribbon, carpet lining composed of waste paper and coloring matter. The company claims use since about July 1, 1919.



Results decide value.



### ***Explains the Full Meaning of Vulcanization.***

Many hardware dealers who sell automobile accessories do not fully understand the uses and advantages of vulcanizing.

Manifestly, their salesmanship can be strengthened by knowing more about the things which they sell. It is a distinct benefit, therefore, to learn and apply the full meaning of the term.

Before the process was discovered millions of dollars were spent in this country in the manufacture of rubber goods that reached the market only to prove unsatisfactory. Many factories were erected, especially in New England, but all were a loss.

These efforts at manufacture failed because of the inability to remove several objectionable qualities in the rubber itself.

Among these were a tendency to stiffen and harden and lose elasticity in cold weather, and to become soft and decompose in warm weather.

The secret of converting rubber from this useless state into one of the most serviceable substances known was learned by Charles Goodyear only after 10 years of arduous toil.

Vulcanization increases the elasticity and distensibility of rubber, and makes it insusceptible to changes of temperature.

In fact, when heated, the vulcanized rubber does not fuse and become clammy and viscid, but remains unchanged at all temperatures short of the absolute decomposition point.

Vulcanization is generally spoken of among rubber manufacturers as the "cure." Many efforts have been made to discover other and less expensive methods of curing rubber, but thus far without much success.

In tire manufacture the process of vulcanization is especially expensive.

This operates in two ways, first, in the cost of the operation itself, and, second, in the cost of adequate supervision to make sure that materials are not spoiled during the process.

A single drop of moisture in the rubber or fabric will, when the tire is subjected to heat in the vulcanizer, turn to steam and expand into a "blister."

After the tire is built it is placed in a steel mould weighing from 500 to 6,000 pounds.

When the building of the tire has been completed and it has been placed in the mould, it goes into the vulcanizer—a big hollow tank capable of holding a dozen or more tires of average size.

When the tires are in place in the vulcanizer, the lid is screwed down and the steam turned in.

The temperature rises gradually for 20 minutes when a temperature of about 286 degrees is reached. The tire remains at this temperature for about two hours, when the steam is turned off.

After 15 minutes of cooling the moulds are taken out and the tires removed, and stripped from the cores on which they were built.

If everything has been done right the tire is a good one, but if there have been errors or slipshod work, the tire is spoiled.

Once a tire has been vulcanized it can not be changed.

It is like a jar in a pottery, until it is baked anything can be done with it, but once baked its form becomes permanent and changes can not be made.

### ***Elaborates the Definition of a Salesman.***

The man who wrote the dictionary certainly gave a concise and clear cut definition of the word salesman—a man who sells goods, says *Door-Ways*, the house organ of Richards-Wilcox Manufacturing Company, Aurora, Illinois.

This eliminates the order taker, the man who tries to work his friends for sufficient volume of orders to make a showing with the boss, and puts the situation down on a bed rock basis of selling.

Every man whose business it is to cover a certain territory as a representative for a manufacturing organization, or a distributor whose income is derived from the sales of the goods built or handled, should carefully study the definition the dictionary gives to the word salesman.

It does not say that he is a man who shakes hands the heartiest, who smiles the broadest, who talks the loudest or longest, who makes the most calls in a day.

It does say that he is a man who sells goods, and the man who sells goods makes enough calls every day, whether he makes one or a dozen.

The ability to sell goods depends upon three important mental attitudes—courage, courtesy, conviction.

A real salesman faces every condition with firm belief in himself and his ability to meet any situation he may be called upon to face. This is the courage part of it.

He treats the man he is talking to with a deference due to his position, maintaining his own dignity, but also maintaining the respect of his prospective customer, by his own handling of any argument in question, or any desire for explanation. This is the courtesy part.

He believes in the goods he sells, knows where they can be used to advantage, how they can be used profitably, and why they can be used with the greatest satisfaction. This is the conviction part of it.

With these three mental processes functioning in the right way, and with good judgment dictating as to where he should make his call for sales, a real salesman substantiates in every day's work the dictionary definition "A man who sells goods."

When Jim Healy landed a five-year contract to furnish all the horse-shoes used by Barnum & Bailey's Circus, in the face of the most strenuous competition that could be brought to bear against him, he won out because his salesman analysis of the buyer's frame of mind was built on courage, courtesy, and conviction.

He believed in the horse-shoe he was selling. He had the courage to wait all day while other salesmen presented their story to the buyer; he had the courtesy to select a time inconvenient to himself, but convenient to the buyer, and he had the business foresight to know that the constant stream of salesmen tumbling over each other for an interview, left the mind of the buyer in a confused state.



Jim Healy waited until every other horse-shoe salesman had had his talk, then he added two hours to his wait for good luck, reached the buyer when he was in a clear frame of mind, told a quick, concise, convincing story, and secured the order.

In selling it is not always the early bird who catches the worm; it is more often the bird with the keenest eye and the correct judgment as to when to look for the fattest worm.

Steam in salesmanship is about the same as it is in a locomotive; it needs to be guarded with governors, eccentrics, and other regulative devices, so that it is not utilized until the piston is in position to receive it, and deliver its full working capacity.

In selling don't rush, don't loaf, don't be too confident, don't give up too readily. Strike the sane balance between these four, and know that the other man's opinion of you and your work is exactly what your own opinion is of yourself and the goods you sell.

### Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

34712.—A mercantile firm in Netherlands desires to secure the sole agency for the sale in Holland and the Dutch East Indies of cutlery, such as knives, forks, and spoons, of high-grade quality; and scissors, razors, etc., of medium and better qualities. Quotations should be given c. i. f. Dutch East Indian ports or Netherlands ports. Reference.

34725.—A mercantile firm in Belgium desires to secure representation for the sale of iron mongery. No reference offered.

### Coming Conventions.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 8, 9 and 10, 1921. C. L. Thompson, Secretary-Treasurer, Canyon, Texas.

Stove Founders' National Defense Association, Hotel Astor, New York City, May 10, 1921. R. W. Sloan, Secretary, 826 Conwell Building, Scranton, Pennsylvania.

National Association of Stove Manufacturers, Hotel Astor, New York City, May 11 and 12, 1921. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

Hardware Association of the Carolinas, Charlotte, North Carolina, May 10, 11, 12 and 13, 1921. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Iowa Sheet Metal Contractors' Association, Savery Hotel, Des Moines, Iowa, May 11 and 12, 1921. R. E. Pauley, Secretary, Mason City, Iowa.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, 1921. F. D. Mitchell, Secretary-Treasurer, 4106 Woolworth Building, New York City.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1921. R. P. Boyd, Secretary-Treasurer, Box 19, Rural Free Delivery Number 4, Knoxville, Tennessee.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, 1921. John Donnan, Secretary-Treasurer, Richmond, Virginia.

Western Warm Air Furnace and Supply Association, Sioux City, Iowa, May 17 and 18, 1921. John H. Hussie, Secretary, Omaha, Nebraska.

Southeastern Retail Hardware and Implement Association (composed of Alabama, Florida, Georgia and Tennessee), Atlanta, Georgia, May 17, 18, 19 and 20, 1921. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta, Georgia.

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, May 24, 1921. Allen W. Williams, Secretary, Columbia Building, Columbus, Ohio.

Metal Branch of the National Hardware Association, Hotel Cleveland, Cleveland, Ohio, June 3 and 4, 1921. George A. Fernley, Secretary, Philadelphia, Pennsylvania.

Mississippi Retail Hardware and Implement Association, Great Southern Hotel, Gulfport, Mississippi, June 14, 15, and 16, 1921. E. R. Gross, Secretary, Agricultural College, Mississippi.

American Society of Heating and Ventilating Engineers, Cleveland, Ohio, June 14, 15, 16 and 17, 1921. C. W. Obert, Secretary, 29 West 39th Street, New York City.

National Association of Sheet Metal Contractors, Fort Pitt Hotel, Pittsburgh, Pennsylvania, June 14, 15, 16, and 17, 1921. Edwin L. Seabrook, Secretary, 261 South Fourth Street Philadelphia, Pennsylvania.

National Retail Hardware Association, Louisville, Kentucky, June 20, 21, 22, and 23, 1921. Herbert P. Sheets, Secretary, Argos, Indiana.

Sheet Metal Contractors' Association of Ohio, Hotel Gibbons, Dayton, Ohio, July 19, 20, and 21, 1920. William J. Kaiser, Secretary, 123 East Chestnut Street, Columbus, Ohio.

### Retail Hardware Doings.

#### California.

B. E. French has sold his interest in the Race and French hardware at Lindsay to A. E. Skinner of Hanford.

#### Georgia.

S. P. Turnbull's hardware store at Moultrie is now open for business in its new location on South Main Street.

#### Illinois.

Roy J. Silver, who has conducted a hardware store at Lovington for the last two years has sold his stock of goods to Jesse Behen and Fred Wood.

A new hardware firm under the name of Tessendorf Brothers will open at Elgin soon in the Witte Building.

Mullen and Sons are daily receiving hardware for their new department recently added to the store at Savannah.

#### Indiana.

The Kimbrough Hardware Company of Muncie have changed their firm name to C. M. Kimbrough Company.

The Rosenberger-Klein hardware store in West Franklin Street at Evansville, has been sold to W. T. Dale, of Alton, Illinois.

#### Iowa.

Flannagan and Company of Pleasantville, took possession of the hardware business formerly conducted by Charles Steele in the building of the Local Union, at Melcher.

E. E. Hanson and Company have sold their hardware and machinery business at Callender.

#### Kansas.

C. L. Plumb has leased the east room of the former C. G. Cohran stand and will put in a complete new stock of hardware at Plainville. The new store will be opened about the first of May.

#### Minnesota.

Ed Dahl has taken charge of the tinshop at the Anderson Hardware Company's store at Dassel.

Joe Hommes has purchased the hardware interest of the Schuller Auto and Mercantile Company at Robbinsdale and will conduct that part of the business as his own.

#### North Dakota.

Sorenson Brothers of Belfield will open a new hardware store in New England soon.

Cole Brothers have purchased the C. W. Parker hardware store and fixtures at Lisbon.

#### New York.

George T. Dence Company, of Gloversville, have been incorporated with a capital stock of \$10,000 to deal in hardware and autos. Incorporators are G. T. Dence, E. Luff, M. C. Haag.

Geesler and Keller, of Fort Plain, hardware dealers, have been incorporated with a capital of \$8,000 by I. and L. E. Gessler, P. Keller; attorney, L. B. Moore, Fort Plain.

Wilcarth and Kraft Hardware Company has been incorporated at Buffalo with a capital stock of \$25,000, by C. G. and W. F. Wilcarth, and F. H. Kraft.

#### South Dakota.

Harry Johnson has purchased an interest in the Sweeney Hardware Company of Rapid City.

#### Wisconsin.

Kenneth L. Hollister of Delavan has sold his hardware store to William D. Dupre of Antioch.

Martens Brothers have sold their hardware stock and business to D. McClyman and Sons of Kilbourn.

George Boss has sold his interest in the Sparta Hardware Company to his partner, John Davis, who will conduct the business alone at Sparta.

# Advertising Help and Comment

**Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.**

As a rule, women are not interested in the mechanical details of a washing machine.

They want a machine which is easy to operate.

Most of them object to a long list

This is what Tatum & Cunningham do in their advertisement of the "Automatic Washer" in the *Corsicana Daily Sun*, Corsicana, Texas.

Nothing could be simpler and

washing is done with it, there is always more or less muss.

Of course, it is also a back-breaking way of doing the work.

So significant are the words, "no work, no muss, no worry," that Tatum & Cunningham's advertisement would be much more effective if these words were set in display type underneath the illustration.

\* \* \*

To mention a big cut in prices on ranges without giving the slightest inkling of the actual amounts is not good advertising psychology.

This is the defect in the otherwise clever advertisement of Peoples Hardware Company, reproduced herewith from the *Muskegon Chronicle*, Muskegon, Michigan.

Everyone who reads this copy is sure to make some sort of guess as to the extent of the "big cut in prices."

Those whose guess is more than the amount of the reduction will be disappointed when they go to the Peoples Hardware Company's store and find that the cut in prices is not as big as they imagined.

They will, therefore, be inclined to think that the Peoples Hardware Company has used exaggeration in the advertisement.

An unfavorable impression will



Let the Automatic put an end to Wash Day Worry. This Automatic "laundress" will wash all your clothes snowy white and wring them without a bit of effort upon your part. Just put water and soap and clothes in the tub and turn the lever. YOU merely guide the operation. No work, no muss, no worry; and scarcely any cost. Why not get one today.

**TATUM & CUNNINGHAM**  
Hardware

of instructions about how to run the washer and what to do when it gets out of order.

The average housewife looks to her men folks for anything which needs repair around the home.

If a fuse blows out in the electric current, she would no more think of switching off the current and replacing the burnt-out fuse with a good one than she would of climbing up to the roof to put in a new section of eaves trough.

She waits until her husband or son comes home for work of that sort.

In advertising washing machines, therefore, it is important to give the prospective woman customer a clear impression of easy operation.

more intelligible in the form of instructions than the directions given in this sentence of the advertisement:

"Just put water and soap and clothes in the tub and turn the lever."

This impression of easy operation is deepened by the words which follow:

"No work, no muss, no worry."

Note particularly the expression, "no muss."

If there is anything the average woman hates with every nerve of her body it is a muss.

Indeed, that is one of the chief drawbacks to the old-fashioned washtub.

No matter how carefully the

**Peoples Hardware Co.**

O. A. Hopperhead  
35-37-39 PINE ST.

PHONE 2815 PHONE 2819

**Special Sale Big Cut in Prices on Ranges**

—If you are in need of a Range this is your chance; no further reduction in price this season. The manufacturers positively guarantee there will not be any reduction below the present Big Cut.

—Cast Ranges, Steel Ranges, Malleable Ranges, Combination Ranges, Gas Ranges, Cook Stoves, Laundry Stoves—all are included in this sale. We want to call your special attention to the Rust Proof Malleable Range. No other like it. Superior to all. Come and investigate; we can prove it.

Girls' and Boys' Ball Bearing Roller Skates.  
Flash Lights at Closing Out Prices

**Peoples Hardware Co.**

PHONE 2819 PHONE 2819

be produced on them which will have the effect of making it more difficult to sell them any of the goods thus advertised.



# Warm Air Heater Ordinance of Sioux City, Iowa, Is Adversely Criticized by Practical Men in the Trade.

*A Just and Helpful Warm Air Heater Code Should Be Such as to Protect the Legitimate Interests of All Concerned.*

In the case of the Sioux City, Iowa, warm air heater ordinance, it would seem that the good intentions of those who devised this law were greatly hindered by the lack of sufficient practical and technical knowledge.

Some of the main parts of the ordinance are published on pages 26 and 27 of the April 16th, 1921 issue of AMERICAN ARTISAN AND HARDWARE RECORD.

These portions of the ordinance have called forth adverse criticism from men of long experience in the trade who have at heart the best interest of their craft as well as of their customers.

L. A. Brand of the Riverside Tin Shop, Sioux City, Iowa, has spent thirty years of his life in practical sheet metal and warm air heater work. His analysis of the Sioux City Ordinance is as follows:

"Section 141, Article 1. All furnaces are now set with regard to service, allowing for northwest corner, coal bin, to suit cellar, laundry, etc., and have but one top out of which pipes can be run in any direction. Now, brick sets must be built eighteen inches higher and take air out of sides to allow six inch hot air space overhead. You would have to set furnace in center of basement to get out all hot air pipes, regardless of all else.

"Article 2, Section 141. If all furnaces were kept eighteen inches below the joists and the tops were sanded (flat tops provided with one and one-half inch sand ring, center of pitched tops, center of inverted cone rounded up three inches high in center), no other protection would be needed.

"Article 3, Section 141. One square foot of radiation for every five hundred cubic feet of space. Take an example: A Wise furnace No. 218 has an eighteen inch fire pot. Also it has 6,200 square inches of radiation or 43 square feet. Forty-three square feet times 500 is 21,500 square feet. Therefore, this furnace should heat a building 45x50 feet with 9-foot studding. It is only rated from 6,000 to 12,000 feet which is about right, not 21,500 regardless of exposure, walls, windows, etc.

"Article 5, Section 141. If floor register boxes are IXXX tin air-spaced, one-half larger thimbles are not needed for protection.

"Article 3 (g), Section 17. I favor this part of section 17 covering furnace permits, for two reasons: First, we have one installer of furnaces here who hurts us all by trying to heat a house 24x30 with 9-foot studding with 2 or 3 twelve-inch hot air pipes. He uses old steel ceiling or anything on return joist. Also, he puts a hot air damper clip in smoke pipe with not even a piece of iron riveted on it partially to stop draft. A second reason is, one party here bought a furnace from a drummer in a railroad smoker and he had one hot air register directly over the furnace 20x20 inches, one hot

air pipe nine inches to bedroom, one hot air nine inch pipe to bathroom. His cold air consisted of four openings between studs 3½x14 inches. Results, 526 inches hot air, 196 inches cold return. When I explained the shortage to the contractor, he had it altered for more return air.

"Article 3, Section 140. I hope that this section of the ordinance sticks and gets proper backing. As you will note our inspector altered the ½-inch air space to 5/16 after being told it was not and would not be made with ½-inch space. The shorter a hot air pipe is the better the service. I would like to see them all less than five feet long. I believe a stack of IC coke, paper covered and incased in tight tin jacket, is better than air spaced and we could then make up

our stack in slack time. This pipe could be slid through the walls by cutting out place above and below and not ruin the walls. Building codes now demand that every ninth lath be broken and also demand that we cut our lath and plaster on two studs from floor to ceiling. From floor to ceiling put asbestos board ⅛-inch on the back and sides. Put in air-spaced stack, cover same with a little lath and plaster, leaving two seams which can not be kept from cracking.

"The code also demands all partitions rest on double joist which the plumber and furnace men cut out and head to get pipe through. I have just figured on a job and to avoid later trouble I told the prospect what had to be done with the walls and he told me to take my furnace where they don't need them and he put in hot water. I never use one or two cold air registers placed in center of building, but put four cold air faces in the

**Making allowances for extremes of temperature in various parts of the country, the physical conditions in which warm air heaters give a maximum of service and safety are fairly well determined by the experience of practical men in the trade.**

**It is known with certainty what the fire hazards of the warm air heater are and what measures need to be taken to eliminate them.**

**It comes within the function of law-making bodies to pass legislation for the protection of life and property. In theory, at least, laws are intended to protect and promote the common good.**

**But in carrying out the purpose of law, it is important that its intentions be harmonized with the facts of science and practical experience.**



floors at outside wall, preferably under windows and box the joist to near the furnace in good galvanized iron. For that reason, I prefer monopipe jobs to pipeless. I believe if danger exists it comes from shortage of air circulation. A small supply or delivery of air must be super-heated but a full capacity of air can not be over-heated, as per the "Furnace Man's Hand Book" by M. H. Smith. A furnace with a 40-inch casing has an air capacity of 440 cubic inches to which I have added my own supplement as follows:

"If one pipe is wanted it should be 24 inches in diameter.

"Two pipes, one of 16 inches and one of 18 inches; 3 pipes, two of 14 inches and one of 12 inches; 4 pipes, three of 12 inches and one of 10 inches; 5 pipes, 2 of 12 inches and three of 10 inches; 6 pipes, 3 of 10 inches and three of 9 inches.

"I opened a small shop in a suburb of Sioux City three years ago and have placed about forty furnaces and have had but one kick, and I know that in that case it was a poor flue. I have never had a fire from a hot air furnace and I don't see how it is possible to have one.

"If you remember, we used to have a red hot base burner set out two feet from wainscoting, direct heat and no fire. A plumber just told me that this ordinance which I am discussing was the best move. They can figure with us now on prices. I believe this whole thing was framed by some well-posted enemy of hot air furnaces."

Jessie M. McHenry, Manager of the Warm Air Furnace Department of Bridge and Beach Manufacturing Company, St. Louis, Missouri, does not see much benefit to be had from the operation of the Sioux City ordinance. He gives his opinion as follows:

"In regard to your expressed desire that I pass judgment on the merits or demerits of the Sioux City Code, I am very glad to do that, but I will be rather restricted in my comments, owing to the fact that the synopsis is quite limited.

"Before offering comment, I would like to say that I am favorable to reasonable regulations for the protection of the public against the impositions practiced in some sections, particularly where the speculative contractor is permitted to operate without restriction.

"In regard to the Sioux City Code, it occurs to me that it is rather ambiguous, and incomplete, and will become a source of contention between the Inspectors and Contractors.

"For instance, it is required that 'Smoke Pipes shall be kept at least two feet below the wooden beam, or ceiling above the same, unless said beams or ceiling shall be properly protected by a shield or tin plate suspended above said smoke pipe, etc.'

"It is quite evident that the one who drafted this paragraph, overlooked the fact that this pipe radiates heat in all directions. Combustible material, whether above, on the side, or below the smoke pipe may constitute a fire risk.

"Without further comment, I submit the above, to show the inconsistency of this particular paragraph.

"Under the heading 'Portable Furnaces', it was specified that the furnace shall be kept at least one foot below all wooden beams, or ceilings, and further states

that said beams and ceilings shall be covered with approved fire proof material.

"May I call attention to the fact that a furnace is a furnace, and a casing is a casing to the furnace? This particular paragraph specifies that the furnace shall be not less than one foot below the ceiling, etc.

"Without an interpreting clause, this particular section or paragraph will certainly lead to misunderstanding between the contractors, and the inspectors.

"Under the heading, 'Size of Furnaces', may I say that this section as written, is altogether too ambiguous to be of any value whatever. As an illustration, there is no reference whatever to the character of the heating surface required.

"In this connection, may I call attention to the fact that ash-pits have a certain value as heating surface? Some, I am free to admit, are rather doubtful in their value, but there are other ash-pits which constitute surfaces of considerable value. Here is a chance for contentions to arise, which may be, in some circumstances, very difficult to adjust.

"Furthermore, there are furnaces on the market which have extended surfaces, and flue surfaces, of very doubtful character or efficiency.

"Time and space will not permit me to go into this subject, because it is one of the points in furnace construction, not easily understood by those who have not had the opportunity to go into the higher engineering phases of this question.

"It is my opinion that the Code as written, will be of no particular benefit to the public or the installer."

George Harms, of F. Meyer and Brother Company, Peoria, Illinois, believes that the building codes should be prepared in such a manner as to insure the best results for the people and those who serve them. He comments briefly on the Sioux City Code as follows:

"In your issue of April 16th, you print the building code for Sioux City, Iowa, as it pertains to the Installation of Warm Air Furnaces, excepting the first article 'Requirements of Permits,' which make it necessary that a permit must be issued before any furnace can be installed. The balance of the code is of no value whatever.

"A code covering the installation of warm air furnaces should be so constructed that it assures the very best installation, prevents loss of life and health, through fire and disease, safeguarding the occupants of buildings. There is so much more to a furnace than merely a lot of castings.

"In preparing a code, the furnace pipes and registers should be properly specified, as they are all a part of the heating system and the most important of all is proper installation and, therefore, this should be covered very thoroughly.

"There is a great need of building codes, covering not only warm air furnaces, but all methods of heating, but these should be so prepared that they cover the subject in its entirety and when such codes are adopted, they should be strictly enforced."

A. C. Buzzard, dealer in warm air furnaces, Holly, Michigan, declares that the Sioux City ordinance gives a wrong impression of warm air heating. He says:

"I have read with interest the specifications as out-

lined in Sioux City ordinance and must say it is *some* ordinance.

"While this ordinance may be all right, especially from Mr. Colby's viewpoint, it is heaping a big unnecessary expense on the furnace owner and does *not* insure the purchaser of a properly installed job for maximum service.

"After reading this ordinance to one unacquainted with warm air heating, he would draw the conclusion that a furnace installation was nothing more than a fire trap. This is not the case and can not be proven as such.

"It is unnecessary for us to go into details regarding this ordinance. It is too radical to discuss or even cuss.

"To sum up the whole situation, the writer would very much like to ask Mr. Colby to try out the following demonstration, namely:

"First—Take, say 5 feet of double wall stack and wrap with wood excelsior about 6 inches thick.

"Second—Attach to the smoke collar of a common wood heating stove.

"Third—Build a hot fire with dry wood or any light inflammable material, thoroughly saturated with kerosene oil so the flames will reach through the top of the wall stack.

"Fourth—Report results."

John H. Hussie, Secretary Western Warm Air Furnace and Supply Association, Omaha, Nebraska, says that the Sioux City ordinance on warm air heating installation is a fair example of what may be expected when such an ordinance is written by some one who is unfamiliar with the warm air heating business. "No doubt," says Mr. Hussie, "the man or men who wrote this law had no desire or intention of putting the warm air furnace out of business, but it is equally true that under such an ordinance, it would be impossible properly to install a warm air furnace without violating the law.

"Some years since, a code similar to this was written by certain persons in New York and recommended by them for enactment into a law in all states. At that time I took issue with the authors and, I believe, proved that certain passages in the proposed code were impractical and really defeated the ends for which the code was written.

"Because of the danger of having laws such as this Sioux City ordinance enacted, The Western Warm Air Furnace & Supply Association and the National Association of Sheet Metal Contractors have for a year past had a joint committee working on a code that would furnish ample fire protection, and would insure to the home owner a first class heating job.

"This committee finally agreed upon a code that was believed to cover these points reasonably well. It was written in the form of a state law and introduced in the Nebraska Senate this winter. It met with violent opposition.

"Now, who do you think opposed it? Certain Eastern furnace manufacturers. No one else. I have tried to find out what their objection was but have failed thus far. Of course it didn't pass. Legislators took the reasonable position that as the furnace men were

divided, they would let it wait until we at least could agree.

"Now, had this proposed code been in force in Iowa, this Sioux City joker would not have been forced upon the heating men of that city. Of course, this Sioux City code can not last. I am willing to wager it will not stand a test in Court. It requires impossibilities and contains absurdities. Why? The Building Inspector states in the article you print that he does not hope to follow it. At least, he allows violations of it.

"This Sioux City code has in my judgment but one fitting resting place and that is the grave. But, I repeat, it serves the heating men just about right. If we don't know what we want, then we must take what others dish out to us.

"If the trade papers will get behind a good heating law and help have it passed in each state, such foolish things as this will not occur."

Charles Hahn, 5205 Irving Park Boulevard, Chicago, Illinois, one of the closest students of warm air heater installation and a man who has many years of successful work with which to back his judgment, affirms it as his conviction that architects are to blame for much of the difficulties encountered in making satisfactory warm air heater installations. He says:

"How many times do we read of fires from overheated furnaces!

"Then we furnace men go right on about our business without bothering our heads further about the matter.

"It is wrong. I will wager that if we were to investigate we would find that the owner or tenant built a coal bin or shed too near the furnace. Just the other day I had an example of that. A report came into my shop of an overheated furnace. I had the job of repairing it and I wanted to convince myself whether or not it was really the furnace installer who was at the fault.

"After close examination, I found that I could really compliment my competitor on the sane construction of that installation. I told the contractor that it could not be a case of overheated furnace and he replied: 'Oh they built a partition too near.'

"You will find in nine out of ten fires where they report overheated furnace that some other cause put there after the furnace man is through is responsible for the trouble.

"In the twenty odd years that I have been in business, I have yet to hear of anyone of my jobs or those of my competitors really catching fire.

"The Sioux City ordinance will work a hardship on owner and installer. Can you imagine the owner of an old house listening to the furnace man telling him how he will have to cut out walls, etc., to install a furnace and a hot water man will tell him not a thing need be disturbed.

"I know all the rosy talk we get about the time will come when the furnace will come into its own, when laws will be passed that insure results. But I want to go on record right now that unless we have architects who will remember to make allowances for a furnace in their plans such as straight way for stacks, proper location of chimney, and special width partitions where two or more rooms up stairs are to



be heated, we will remember furnaces as we remember horse cars—and hot water will stay in its own.

"I will ask isn't it true that when the furnace man comes on a job he has to knock studdings out for every stack made? The sill is first, then first floor studding is in middle of joist and as you go up this joist is exactly in the middle or we find the plumber, electrician, or gas man has put his pipes in the only space left for the register, etc.

"It is not a law that furnace men need so much as a big stick for the high-brow architects."

Joseph Harmon of Harmon and Zell, 412 Central Avenue, West Duluth, Minnesota, is a strong advocate of good laws governing installation and inspection of warm air heaters. With regard to the Sioux City ordinance, he writes:

"The trouble with the warm air furnace business is that there are too many writing ordinances who could not install warm air furnaces and who have no practical knowledge of the requirements.

"I should think that installers and manufacturers in Sioux City with the help of local sheet metal workers and real estate dealers could draw up an ordinance that would protect the public from the 'Jim Crow' installers.

"The most of this trouble comes from hot water heating men and plumbers. They all have a bum hot air furnace set up in their shop. It's what they call a knocker, because there are twenty warm air heater jobs nowadays to one of hot water and they work every way they can to knock the warm air heating system out. They tried it some time ago in this city and got left.

"All warm air heating jobs should be done under an ordinance to protect the public's life and property and inspected by a competent man with knowledge and years of experience.

"The parts of the ordinance as printed in AMERICAN ARTISAN AND HARDWARE RECORD issue of April 16th, pages 26 and 27, to which I object are the first paragraph of section 140, Article 1; the first paragraph of Article 3 of section 140 dealing with hot air registers and pipes; and Article 2 of section 141 on portable furnaces."

### **Offers Advice to Arch Wilson on Installation Problem.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

In reply to the article by Arch Wilson in your issue of April 9th, page 23, it would seem as if it would be quite possible to improve on his installation. A 26-inch fire pot should not have less than 600 square inches passing capacity in a one pipe job and his register will only measure up 288, which is less than one-half of the register opening it should have.

And it will not only cause the high point of his fitting to overheat but have the same effect on a complete installation.

It is my belief that if brother Arch will use a register large enough to carry this said 600 square inches for both warm and cold air it will be a marked improvement. However, the point that he marked as *Hot* will

be *Hot* unless he uses a baffle of some kind to divert the heat rays.

I would suggest that our friend read the address on a warm air installation by Anton Ohnemus in the same issue of the AMERICAN ARTISAN AND HARDWARE RECORD, beginning on page 27.

As an afterthought I am enclosing a check for another year's subscription.

Yours truly,

W. B. COLLINS,

Atlantic Sheet Metal Works.

Atlantic, Iowa, April 15, 1921.

### **Program of Warm Air Heating and Ventilating Association.**

An earnest and friendly invitation has been sent out to all makers of warm air heaters and accessories by the Executive Committee of the National Warm Air Heating and Ventilating Association to attend the eighth annual convention of that body in Hotel Winton, Cleveland, Ohio, May 24, 1921.

A strong program has been arranged for the sessions and every one in attendance is certain to be amply repaid for the time spent in the convention. The program is as follows:

- 10:00 a. m.—Call to order.
- 10:05 a. m.—Calling the roll.
- 10:10 a. m.—Reading minutes.
- 10:15 a. m.—Communications.
- 10:30 a. m.—Appointment of Committees.
- 10:45 a. m.—President's address.
- 11:00 a. m.—Report of officers.
- Treasurer's report.
- Secretary's report.
- Executive committee's report.
- Report of other committees.
- "The Use of Fans in Home Heating," by J. D. Spurrier, Detroit, Michigan.
- "A Foundry Problem," by W. H. Barr, Buffalo, New York.
- Discussion on Areas and Surfaces of Warm Air Heaters, by J. M. McHenry, St. Louis, Missouri.
- 12:30 p. m.—Buffet lunch. All present are invited to be the guests of the association at this luncheon.
- Report of Advisory Committee on Warm Air Furnace Research: P. J. Dougherty, Utica, New York, Chairman; Professor A. C. Willard, Director, Urbana, Illinois.
- The Welfare of the Industry.
- Discussion of subjects which may be brought up impromptu including trade customs and conditions.
- Unfinished business.
- Report of nominating committees.
- Election of officers.
- 6:00 p. m.—Banquet in Hotel Winton.

### **Business Friends Aid Furnace Supply Firm After Big Fire.**

A disastrous fire, Friday, April 15th, attacked the building at 549 West Monroe Street, Chicago, Illinois, where the plant of the Chicago Furnace Supply Company was located, forcing the firm to suspend manufacturing operations.

Temporary quarters with office have been secured at Room 207, 803 West Madison Street, where the Chicago Furnace Supply Company is accepting and filling orders for goods.

The Company is enabled to take care of its customers by drawing supplies from the stocks of its friends in the business, all of whom came forward with offers of assistance.

Several available sites are under consideration by



the Chicago Furnace Supply Company with a view to resuming direct manufacturing at the earliest possible time.

## **DISCUSSES HEAT REGULATION IN RELATION TO HUMIDITY.**

*(Continued from last week.)*

Again if these principles are kept in mind it will be understood why the "dry" room at 165 or even 180 degrees Fahrenheit, "feels" cooler than the "steam" room at 90 degrees Fahrenheit. The skin is actually cooler in the former, because it is able to lose heat rapidly by evaporation, although it may be gaining some heat by conduction and radiation at the same time.

By the three methods, namely, conduction, radiation and evaporation, the body loses all the heat that it makes. All these vary in rate with external and internal conditions. All of them become ineffective under conditions of high temperature and high humidity. Hence, the deaths in the "black hole of Calcutta," and the so-called "sunstrokes" on a hot, humid day.

### **Methods of Internal Adjustment.**

Various external factors have been referred to that affect the rate of heat loss by the three methods of conduction, radiation and evaporation. The body from its side is not passive.

It has two ways of accommodating or adjusting itself to the three methods of heat loss and thus keeping a constant temperature.

The first is by the distribution of the blood. When the outside temperature is hot, much blood is sent from the internal parts to the skin. The skin temperature is raised by this warm blood and the rate of heat loss by conduction and radiation is increased. When the outside temperature is low, little blood is sent to the skin and less heat is lost by conduction and radiation.

The second method of internal adjustment is the sweat secretion. This liquid which is practically nothing but water is extracted from the blood by coiled tubes, called sweat glands, located in the skin.

When the temperature is high, the amount of secretion increases; the liquid surface exposed to the air increases; evaporation increases; the heat loss increases, and the temperature falls.

From the physical side, these processes are easily understood. From the internal or physiological side, their understanding requires that something be known of the properties of the blood vessels and something concerning the nervous system.

The arteries of our body are not like the rigid pipes used for distributing water and steam. For the present purpose, it must be understood that the walls of the arteries contain rings of muscle.

If the muscle rings contract, the tube becomes smaller; if the muscle relaxes, the tube becomes larger.

By the word "contract" is meant shorten through living properties, like the biceps or other skeletal muscles. It does not mean the elastic "contracting" of a spring or rubber on release of stretching force.

It will now be perfectly clear how the distribution of blood is effected for purposes of heat regulation.

If the body is producing too much heat, the blood vessels of the skin expand or "dilate"; those of the interior, on the other hand, contract or "constrict."

The heart pumps the blood everywhere, but naturally more blood goes to the skin; more heat is lost; the temperature tends to fall.

On the other hand, if the body is losing heat too fast, as when the outside temperature is low, or there is a "draft," or it has not sufficient clothing, the outer blood vessels constrict; the inner ones dilate, and the blood goes in greater abundance to the internal organs and less to the skin; less heat is lost, and the temperature of the body is preserved.

It is a beautiful machine, this so-called vaso-motor or vessel-moving mechanism. Heating and ventilating engineers, with all their control of modern materials and modern knowledge of the forces of nature, could not invent a better one.

But, let us go one step further and ask how it is that the muscle layers of the arteries all over the body can act together in such harmony, so as to increase or decrease the supply of blood to the skin in correspondence with the rising or falling temperature of the body. This is where the nervous system comes into play. We call this method of nerve control "reflex action."

### **Reflex Action.**

Reflex actions are so important a feature of heat regulation that what is meant by that phrase, or its shortened form, "reflex," will be explained.

It is, of course, well known that one's central nervous system consists of the brain and spinal cord. While there are convenient descriptive divisions, they constitute really one continuous mass of nervous material.

The word "central" is doubly significant, for in addition to the idea of importance which the lay person would attach to the expression "central nervous system," it carries exactly the meaning which a telephone engineer would attach to the word "central."

Except for its subtle and unknown connection with thinking, the central nervous system is strictly an enormously complex automatic switchboard, with millions of connections.

Indeed, while we can not conceive how the switchboard can think, we get more than a glimpse, as we study this marvelous mechanism, both as to how the materials (sensations) on which thought is founded are secured and manipulated; and how thought can project itself into action. Both are accomplished through this beautiful automatic switchboard, the central nervous system.

*(Continued next week.)*

## **Depends on AMERICAN ARTISAN in His Business.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I will say that I do not desire to be without your journal as my business is that of trouble man to sick furnaces and it is necessary to keep up to date. For that purpose I depend upon your paper.

Yours truly,

C. M. JONES,

Dowagiac, Michigan, April 18, 1921.

# Automobile Radiator Repair Work Profitable if Properly Attended to.

## *Some of the More Important Factors That Enter Into the Building Up of a Prosperous Business in This Line.*

Written for AMERICAN ARTISAN AND HARDWARE RECORD by  
F. L. Curfman, Maryville, Missouri.

The business of repairing automobile radiators promises to be one of the most lucrative branches in the sheet metal line.

At present a large majority of the radiators are sent to the city shops to be repaired. This is not satisfactory to the owner, as it means a delay of one or two weeks in which he can not use his car.

This condition is sure to change, as this work belongs in the sheet metal shops over the country. It is too profitable to let get away, as auto owners are willing to pay a good price for it, and save the delay in sending away. Our object is to help the sheet metal contractor in the smaller towns to develop this line of work.

### Testing.

In testing a radiator for leaks, there are two processes which we use.

1st. The dry process, which is done by first putting stopper in hose connections, close pet cock, fill with water; if the leak is a small one and hard to detect, take a bicycle pump, add an extra foot or two of rubber hose with the ordinary bicycle valve inserted in it, slip this hose over end of overflowing pipe, hold the flat of your hand over the filling cap, and with a few strokes of the pump you have sufficient pressure. By looking over the core carefully with electric lamp you are able to detect the smallest leak.

2nd. The wet process for locating leak is done by building a tank to hold water, large enough to lay the radiator in; connect the bicycle pump to overflow; immerse in water, pump radiator full of air and locate the leak by the bubbles. As a final test this is not altogether reliable, particularly where the tubes go in the tanks. In using this process it is always best to make the last tryout with water in the radiator under pressure.

### Cleaning the Surface to Solder.

Too much can not be said about cleaning the metal preparatory to soldering. It is absolutely necessary to have all dirt and corrosion off before a good job of soldering can be done. In most cases it is necessary to scrape bright with some sharp instrument. In radiator work there are so many different shaped places to get at that a variety of shaped scrapers come handy. A good scraper for plain surface scraping is made by grinding a three-cornered file about one-third of its length until all the teeth marks are out and the three edges are sharp. To make odd-shaped scrapers, use old three-cornered files, heat red hot, turn a hoe shape on end and grind to fill need. A V-shape comes very handy. To scrape back of tube, flatten handle end of file and bend end in a circle, then grind inside edge. To scrape inside of tube the same shape is used, except end is ground rounding. After shapes have been formed,

heat red hot and dip in water to temper. We find it convenient to take a bunch of files and make all kinds of shapes and temper in rough, then grind to fit place we wish to scrape. A little experience in shaping and using these scrapers soon makes it easy.

### The Honeycomb Radiator.

We fail to understand why so many workmen have trouble repairing the honeycomb type of radiators, but we have come to the conclusion it is from the lack of knowledge of their construction, as one's success at repairing any article depends on his knowledge of the construction of the article being repaired. These honeycomb radiators are by far the easier of the two types after you learn how they are built.

With the exception of one or two makes these cores are simply thin sheets of brass or copper pressed into shape leaving a larger space back from the edges, held in a form while front and back edges are dipped in solder.

The best and cheapest experience you could possibly get in studying their construction is to go to the junk man and buy several of these radiators, tear them up

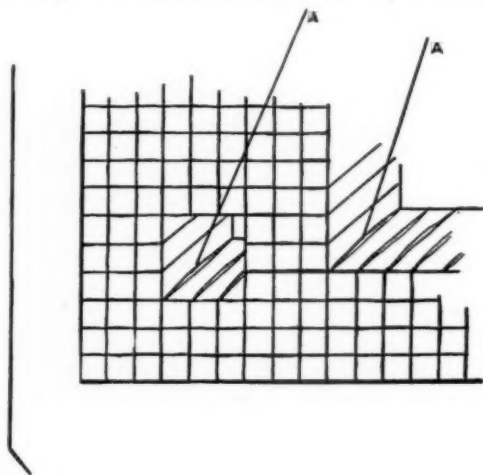


Figure 1. Showing Method of Repairing and Soldering Mutilated Radiator.

by using the torch and taking them apart, a piece at a time. When you have finished sell them as junk, and with what solder you have run off you will be out nothing financially and will have gained more knowledge than you would have in a year of only repairing them.

The following general line of instructions will help some and you will understand them better after tearing a few to pieces.

These honeycombs can also be soldered with the needle flame torch the same as any other torch soldering can be done, except that more care must be exercised because owing to the thinness of the walls, these needle point flames will burn a hole right through the brass



or make it so brittle that when the wire solder is applied it is punctured, making more trouble than the original leak.

Another very important thing is to have the surface you expect to solder well prepared. We believe more rapid progress can be made with this type of radiator after the bad leaks are taken out, by filling the radiator with water and locate leaks by the moisture, than by immersing the radiator in water and locating with air bubbles.

In repairing a leak in the core of a honeycomb radiator, locate the cell that is punctured, then with a cell scraper prepare the metal around the puncture, so you feel sure it will solder. Apply good soldering fluid with a small cloth attached to wire; warm the cell with a torch, using care not to heat too hot and melt solder on edges. Slip a piece of wire solder into cell from back side, then slip a real hot cell iron in from the other end and smooth the solder out over puncture.

If there is any obstruction in cell so you can not get cell iron through, it will be necessary to solder cross cell to up and down cell, above and below. Then puncture inside cell again, so it will drain, plug up both ends with solder, by first slipping a small square cork into cell and filling end with solder. By making this plug deep and applying a little black paint it will not show. If there are several cells mutilated, your quickest process is to cut out the cells like hole to left in illustration. Tie up by soldering at points "A" where up and down cell meet cross cell, which are only soldered at ends. Then cut two pieces of brass and fit in front and back: solder in about  $\frac{1}{4}$  to  $\frac{3}{8}$  of an inch and build in with false work, then paint. This forms a tank in the core, still it makes a quick and good repair, giving the full capacity of cells above and below.

This process can be applied at any point on radiator if at top or bottom it only forms an extension of upper or lower tank, and if you are careful with your building in, only close scrutiny could detect the work.

### ***The Missouri Auxiliary Holds Charter Open for New Members.***

At the meeting for perfecting the organization of the Jobbers' and Salesmen's Auxiliary to the Missouri Sheet Metal Contractors' Association, held April 18th in St. Louis, it was decided to extend an invitation to the entire list of eligible candidates, offering the opportunity to become Charter Members of the organization.

More than 125 jobbers and manufacturers doing business in the State of Missouri, constitute the list of those to whom this opportunity is presented.

E. B. Langenberg of Haynes-Langenberg Manufacturing Company, St. Louis, who is Acting Secretary of the Missouri Auxiliary, has issued a call for another meeting for Monday evening, April 25th, to be held at 4057 Forest Park Boulevard, St. Louis, at which permanent officers will be chosen, a Constitution and By-Laws adopted, and plans formulated for development work throughout the State.

Committees are already engaged upon the task of quickening sentiment in favor of organizing a State Sheet Metal Contractors' Association and it is expected that a convention for that purpose will be called in a very short time.

### ***Program of Trade Development Session of June Convention.***

The schedule for the Trade Development session of the National Sheet Metal Contractors' Association convention in Pittsburgh, Pennsylvania, June 15, 1921, beginning at 1:30 o'clock in the afternoon, is as follows:

Opening remarks by the Chairman.

1. General Use of Sheet Metal and Our Delinquency, Edwin A. Scott, Editor Sheet Metal Worker.
2. Warm Air Heating, George Harms, Peoria, Illinois.
3. Ventilation in Modern Building Construction, D. M. Haines, Chicago, Illinois.
4. Skylights, Their Uses and Standards, Thomas P. Shean, Chicago, Illinois.
5. Metal Roofing—Application and Superiority, Max Walten, Washington, D. C.
6. Protective Coatings, Painting—Paper prepared by Bureau of Standards, A. G. Pedersen, Editor AMERICAN ARTISAN AND HARDWARE RECORD.
7. Blow Pipe and Exhaust Work, Hugh F. Munro, Philadelphia.
8. Fire Prevention Work—A Big Factor in Our Business, Paul L. Biersach, Milwaukee, Wisconsin.
9. The Architect's View Point, George Thesmacher, Cleveland, Ohio.
10. Report of the Year's Work and Financial Accounting by the Committee Treasurer, Paul F. Brandstedt, Washington, D. C.

### ***Wisconsin Auxiliary Directors Will Meet Next Month.***

The Traveler's Auxiliary of the Wisconsin Sheet Metal Contractors' Association is to have a meeting of the Board of Directors on Friday afternoon, May 20th, at 3 p. m. at the Republican House, Milwaukee, Wisconsin. The Board of Directors is composed of the following:

President: E. C. Taylor.  
 Vice-President: J. W. Black.  
 Second Vice-President: Harvey Manny.  
 Secretary: H. H. Wherry.  
 Treasurer: E. C. Dunning.  
 Sergeant-at-Arms: George Carr.  
 J. M. Smith.  
 L. H. Pierce.  
 R. W. Blanchard.  
 A. H. Schmelzer.

The Entertainment Committee for the present year is as follows:

Ellsworth C. Dunning, Chairman in chief.

*Chicago Division.*

Harvey Manny, Chairman.  
 Geo. Carr.  
 T. A. Warner.  
 W. P. Laffin.  
 C. R. Guenther.  
 A. G. Pedersen.

*Milwaukee Division.*

Henry Schwab, Chairman.  
 E. A. Liesman.  
 A. G. Pomerening.  
 E. C. Tyler.  
 L. R. Moise.  
 C. Willman.

### ***Cleveland Pledges \$1,000 to Trade Development Work.***

So firmly convinced are the sheet metal contractors of Cleveland, Ohio, that the Trade Development Committee of the National Sheet Metal Contractors' Association is doing a big work for all concerned, that they have pledged \$1,000 toward the expense of systematizing and publishing the data gathered by the committee.

# You Are Paying Rent for Your Shop Windows and You Ought to Get Your Money's Worth by Use of Them.

*Get a Bucket of Water and Clean Up Your Windows So that the Passers-by Can Look in and See What You Have to Sell.*

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Peoria, Illinois.

(Copyright, 1921, by J. C. Greenberg.)

I just wonder how many sheet metal men use their windows to good advantage. Windows are made to look through of course, but they are made to look into a store as well as lookin out of one.

Do you as a business man know that other people have eyes as well as you have? Do you know that other people want to see what kind of a store they pass when they go by your place of business?

Here is what I am driving at. You as a business man have something that is of interest to the public. Did it ever occur to you that making a show window out of your old window would be a good thing to do?

You are paying rent for that window, and unless you are putting it to good use, you are losing money by having a useless overhead expense in paying rent for windows.

Of course you will say that you are getting light through your windows, and are getting your money's worth. This is all wrong. You are paying rent for windows because they are of use to you, and you must get all the use out of them that is possible.

If they are useful as a show window they should be used as such. This is a way to get good advertising medium. A window is a place to put the very best you have to offer so that the passers-by will see what you have to sell.

It has a double purpose because it creates interest outside, and pride inside. If you have any kind of a show window and do not use it, you are losing a splendid opportunity to interest the public and get results which means profit in the end.

If you are a good sport, you will take a stroll around to the several tin shops in your town and see how the windows look.

If you will see what I have seen in my rambles, you will at once go back to your shop, get a bucket of water and clean up the glass so people can see what you have to sell.

I have no intention to be sarcastic. I have no inten-

tion to trifle with your good nature, but it appears to me that some one must say these things.

As it is now, no one seems to care whether the sheet metal shops have clean windows or not. I do care. I am a friend of all sheet metal men, and do not want them to lose a single opportunity for any kind of advancement.

If I did not correct these little faults, I would indeed be your enemy. Sometimes I wonder why some-

one does not say these little things. Is it because the sheet metal man has no friends? I guess not. It is not so much for criticism that I say these things, it is because every kind of business realizes that the public must see what they have to sell.

Every sheet metal shop should have a clean display window. He should show with some pride his skill in his art.

The sheet metal man can arrange a very pretty window at very little cost. In fact, he can have a display window at less cost than any other business, and can change his show oftener with less loss of time. It should be done.

Sheet metal work is of more use, and of greater benefit than is jewelry, and in spite of this, the sheet

metal man does not think enough of his craft to tell, or show the public what he has, and how well it is made.

I have asked many sheet metal men why they do not have a show window, and most of them answered, "Oh, I don't know."

Some of them I asked said, "Why should I have a show window, no one else has one?" And still others laughed right out loud and said: "Who ever heard of a 'tinner' having a show window?"

It's a general belief that a sheet metal shop must look shabby and poverty-stricken. It should look like a junk shop.

You, friend sheet metal man, must forget all this old-time bunk. You are living and working in a mod-

**Unless you are different from practically all other sheet metal contractors in the world, you want more business. To get more business, you must gain the interest and arouse the buying desire of more people. In other words, you must use some form of advertising.**

**Certainly you would not pay for space in a newspaper day after day and never print a single word about your business in that space.**

**Well, you do something equivalent to that when you neglect to use your shop windows to advertise your business.**

**Greenberg says that the sheet metal man can arrange a window display at less cost than any other business man and can change his show window oftener with less loss of time.**



ern age where impressions rule. Make a good impression, and you create a favorable opinion. Make a poor impression, and you drive friends away. Let us just reason this out for a minute.

Would you have faith in a dirty butcher shop, or a dirty grocery store, or a dirty clothing store? I guess not. This is because they create a bad impression on you. Now then, how in Sam Hill do you expect to create favorable attention to your place of business when you yourself disapprove of dirt and filth?

Fix up a window, but do not fill it up with a furnace only. If you have a small window, put into it all the small things you have to sell. Do not forget paint and cement. Remind the passers-by every time they pass that you have something they need.

This is the season of the year when clean-up and paint-up slogans will fill the air like the notes of the robin. Be on the job and help the public see your art and craft.

All you need is a pail of water, a window brush, a rag, and a little will power. Let us see if we can not get the habit of clean windows, and interesting displays.

Remember that lawn mowers are ready to sharpen, and garden tools will begin to make their appearance. Fall in line.

A dirty window is like a dirty face on a head with nothing in it. A clean show window, is like a thing of beauty and a joy forever, welcome.

Just try to do this just once, and I'll bet that you will get dead stuck on your place, and feel like a banker.

Just get rid of that poverty-stricken ramshackle appearance, and in its place put cleanliness which denotes prosperity and pride. Make the public respect you. Do not have the appearance of disgust.

Cheer up. Clean up your windows. Put up a nice display—and then put on your coat and stand out by the curb, and just size the people up as they pass. Oh man!—it will be that grand and glorious feeling that makes one love the world. Just try it and see.

### **Michigan Sheet Metal Locals Keep Up Their Activity.**

The secret of all powerful organizations resides in continuous and well directed activities. The reason, therefore, why the various locals which form the Michigan Sheet Metal Contractors' Association are able to accomplish so much for their members is that they are not satisfied merely with parliamentary routine.

They are constantly on the alert for the benefit of their members. Their meetings are not cut and dried affairs but original and fully in accord with the needs of the day.

The Kalamazoo Local entertained the sheet metal dealers from Battle Creek and small towns of southwestern Michigan, Monday evening, April 11th. Properly to start off the affair, a banquet was served at the Chamber of Commerce at which all the viands were dispensed with a liberal hand.

When all the appetites had been thoroughly appeased, Ray O. Brundage, Secretary of the Kalamazoo Chamber of Commerce and acting secretary of the Michigan

Building Employers' Association, outlined plans for the organization of the State Builders. He explained the advantages of becoming connected with this new association which is just about completed.

Frank E. Ederle, Secretary of the Michigan Sheet Metal Contractors' Association gave a talk on the general development of that organization. He urged all sheet metal men to become affiliated with the State Builders in order better to carry out the open shop policy which was adopted a year ago at the Saginaw convention.

R. C. Mahon, Vice President of the Michigan Sheet Metal Contractors' Association and member of the Board of Managers of the Detroit Building Employers' Association, read a very instructive paper on the American Plan of Employment. He told in detail how Detroit had been organized along that line and described the benefits which have been derived from the plan.

C. F. Nason, E. F. Ryder and Thomas I. Peacock of the Michigan Traveling Salesmen's Auxiliary, were also present and greatly aided in making the evening a very pleasant one.

The Lansing Local met Tuesday evening, April 12th, in the office of E. H. Ward and Company and the gathering was the most encouraging meeting held in that city for several years. Methods for enlarging the service of the Local to its members were fully discussed, and it was decided to hold at least two meetings a month. The following new firms were accepted as members: Waltz and Guisenhaver, Holland Furnace Company, Homer Paulson, Mike Waltz, W. Waldron, and E. C. Placer.

The sheet metal contractors from Concord, Litchfield, and Homer met Wednesday evening, April 13th, at Homer to discuss the advisability of holding similar meetings regularly. After listening to talks by H. L. Ball of Albion, C. H. Ederle and Fred Ruele, of Battle Creek and Frank E. Ederle, State Secretary, affirmative action was taken. The next meeting will be held in Litchfield, May 13th.

The first of the 1921 district meetings of the Chelsea district was held in Chelsea Thursday evening, April 14th. Firms from that city and from Grass Lake and Dexter were present. The proper charge to make for eaves troughing in small towns was gone into very thoroughly and it was the universal opinion that it costs more to erect this material in country districts than it does in cities. The next meeting of this association will be held in Manchester.

A meeting of the Ann Arbor sheet metal firms was held Friday night, April 15th, in the office of the John C. Fischer Company, to decide whether or not a local association should be formed. Definite action was postponed until another meeting to be held in May but it is quite certain that the ultimate action will be favorable.

The Ann Arbor sheet metal men however, decided to affiliate with the Washtenaw Association of building contractors. All building trades in Ann Arbor except the sheet metal men are now on strike and it is expected that they, too, will be out in a few days. Ann Arbor is the last city in Michigan to come out in opposition to the closed shop.

### ***Establishes a New Rolling Mill in Milwaukee.***

The development of the sheet metal trade in the part of the Northwest tributary to Milwaukee has reached such proportions as to render necessary the establishment of a rolling mill in that important industrial center.

It is in response to the pressure of such necessity that the Milwaukee Rolling Mill Company has established a new rolling mill in Milwaukee, Wisconsin. The rolls were set in motion Tuesday, April 19th. The new enterprise is an eight-mill plant made up of two four-mill units each of which is operated by a 1,000 horse power motor.

The equipment is sufficient to roll a wide assortment of sheets of the various gauges from 10 to 30.

It is the intention of the management to operate a comprehensive galvanizing department with the latest mechanical facilities.

The illustration herewith gives a fairly good idea of the new rolling mill. The building shown at the right is the bar shed. Next to that is the rolling mill proper where the furnaces are located and where the bars are rolled into flat sheets of various gauges.

The annealing building is back of these structures. After the sheets are annealed they are passed into the "pickling" section of the galvanizing room. From there the sheets which are to be galvanized go into the galvanizing pots and come out finished ready for storage or shipment.

Adequate railroad switching connections are a feature of the new plant. It occupies approximately 30 acres of space along Lincoln and 43rd Avenues.

With its present facilities the capacity of the mill is 60,000 tons of sheets annually. The Milwaukee Rolling Mill Company has decided to make a specialty of high grade galvanized sheets which are particularly adapted to the needs of the tinner and sheet metal mechanic because of their pliable, workable qualities.

### ***Work Is Opening Up Well in Northwestern Wisconsin.***

A distinct improvement in the warm air heater, ventilating, and sheet metal work situation is reported by W. A. Standen from Eau Claire, Wisconsin.

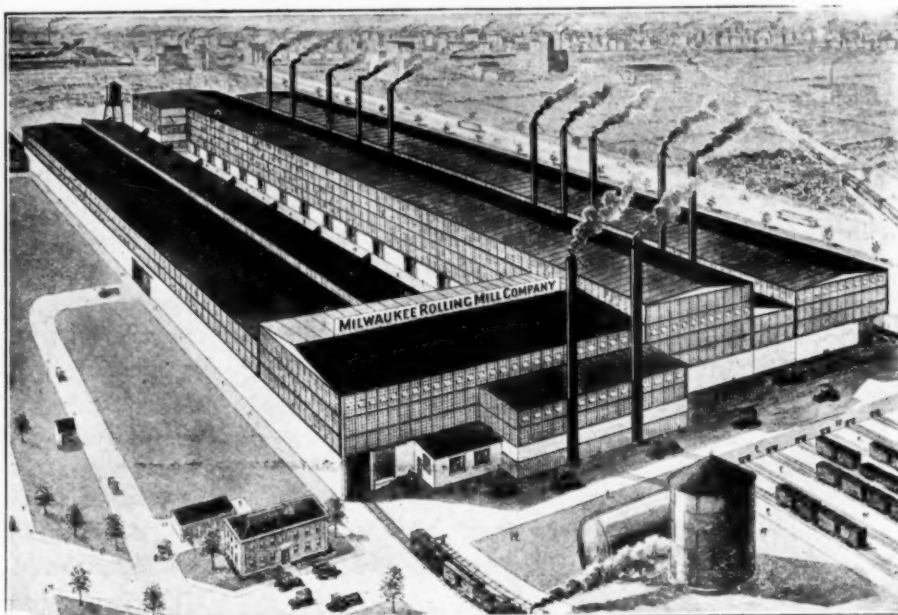
Mr. Standen's business, which includes warm air heating, ventilating, and sheet metal work, is increasing at such a rate that he is in need of additional help for furnace and job work.

To supply the need, he has an advertisement in this week's "Help Wanted" columns of AMERICAN ARTISAN AND HARDWARE RECORD, for a competent sheet metal worker.

Prodigal promises can't create merit.

### ***Durability of Zinc Makes it Most Economical Material.***

When customers come to the sheet metal contractor and complain about the holes rusted through eaves



Plant of the Milwaukee Rolling Mill Company Recently Established in that City.

trough and the consequent annoyance from leaks, he has a golden opportunity to convince them of the value and satisfaction of zinc in such circumstances.

Condensed into a few simple sentences, the arguments in favor of zinc are set forth as follows by the New Jersey Zinc Company, 160 Front Street, New York City:

Considering only materials, the initial cost of galvanized iron spouting is about one-half that of zinc spouting. But to this must be added the cost of labor for installation. On the average job of galvanized iron this labor cost about equals the price of the material. These two items of cost must be met with each replacement.

The erection cost of an installation of zinc spouting is about 25 per cent more than the cost for the same job if galvanized iron be used.

Therefore, the proportionate initial cost of zinc in comparison with galvanized iron is about as  $162\frac{1}{2}$  is to 100, or a little more than one-half as much again.

The cost of a zinc job, however, does not have to be repeated, while the full cost in the case of galvanized iron must be met with each new installation.

According to reliable estimates, a new installation of average galvanized iron spouting will be needed every five years. Zinc, on the other hand, once installed, lasts a lifetime.

After five years, therefore, your cost of galvanized iron spouting will be about one and one-quarter that of zinc; in ten years, a second replacement brings your cost to 182 per cent that of zinc; and every five years thereafter the cost of maintaining galvanized spouting on your property will be increased by almost two-thirds the initial cost of zinc. After 25 years the original cost of galvanized iron, together with required replacements, will be more than three times as great as the total cost of zinc for the entire period. Other replacements of galvanized spouting become necessary at the



end of each subsequent five-year period, thus increasing your total expenditure correspondingly. Clearly, zinc effects a substantial saving in the cost of maintenance when installed at the outset.

Zinc roofing equipment, like copper, lasts a lifetime. For material alone, copper costs twice as much as zinc. Inasmuch as the installation charges for either of these two metals are approximately the same, the total expense of copper is about 60 per cent greater than that of zinc.

Here, again, a substantial saving in cost can clearly be effected by purchasing zinc spouting despite the fact that no replacement costs should be necessary in either case, under normal conditions. Why pay more for the same service which you can secure by purchasing zinc at the outset?

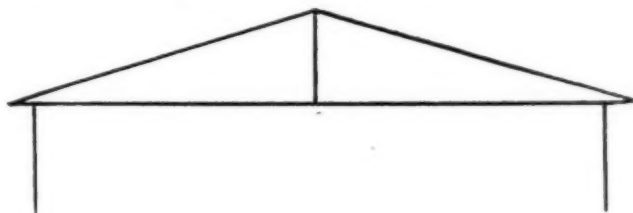
The fact should not be overlooked that for service extending beyond the 25 year period further replacements of galvanized iron will be required at five year intervals, while both zinc and copper can be depended upon to give service for an indefinite period at no cost other than that incurred at the time of installation.

Paint may be used for decorative effects when desired, but is not needed to protect zinc against deterioration. This metal soon takes on a dull gray protective coating which blends effectively with modern architectural practice.

### **Wants Pattern for Wash Boiler Lid in Two Pieces.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I should like to get a pattern for a wash boiler lid made in two pieces, with seam in center.



Sketch of Pattern Desired for Two Piece Wash Boiler Lid.

I am enclosing a sketch of what I want and trust that some of your readers will help me out in this problem.

Yours truly,

NATHANIAL T. POTTS.

Wellsburg, West Virginia, April 7, 1921.

### **Secures a Good Worker by Ad in AMERICAN ARTISAN.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Please take our advertisement out of your "Help Wanted" column as we have secured a good man through the advertisement.

NOBLE SHEET METAL WORKS.

Rhineland, Wisconsin, April 16, 1921.

### **New "Milcor" Net Price List Is Available to the Trade.**

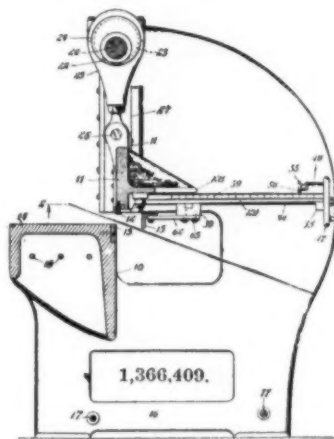
Bearing the date of April 15, 1921, the new "Milcor" Confidential Price List issued by the Milwaukee

Corrugating Company, Milwaukee, Wisconsin, contains revised net prices on sheet metal building products and farm specialties.

A helpful feature of the new Price List is the great number of illustrations which aid in identifying the articles wanted. A note in connection with each illustration tells in what special catalogue of the Milwaukee Corrugating Company and on what page a complete description of the goods can be found.

### **Is Granted Patent Rights for Gauge for Sheet Metal Shears.**

United States patent rights have been granted to Frederick E. Munschauer, Buffalo, New York, assignor to Niagara Machine and Tool Works, Buffalo, New York, a Corporation of New York, under number 1,366,409, for a gauge for sheet metal shears described as follows:



A gauge for sheet metal shears, etc., comprising a gauge bar, slide blocks pivotally connected with said bar, and adjusting screws for actuating said blocks. As to the practical value of such a measuring device in connection with sheet metal shears there seems to be little room for doubt.

The fact that the Niagara Machine and Tool Works has acquired the rights to this patent through assignment is suggestive of the worth of the invention.

### **Why the Customer Should Pay Interest on Bills Past Due.**

A striking illustration of the logic of paying interest on bills past due is given by Edwin S. Kneeland, Credit Manager of Chandler & Farquhar Company, Boston, Massachusetts, as follows:

A few days ago one of our good customers came into our office.

"I was coming to Boston," he said, "and I thought I'd just drop in and straighten this matter out."

Then he drew from his pocket a check for two thousand dollars.

"I sent you this check last week in settlement of my account," he said. "You returned it, saying it didn't settle the account—that there was a matter of thirty days' interest, ten dollars, still due. To be frank," he said, "I think this is pretty small business. How do you feel about it?"

"Suppose your merchandise account had been two thousand and ten dollars instead of two thousand," we asked, "and you had sent us a check for two thousand and we had returned it would you have considered that small business, too?"

"No," he replied, "I should have considered that thoroughly justifiable."

"Then," we continued, "it is only the matter of interest you object to? You feel that a charge for mer-

chandise is just and should be paid but an interest charge is unfair?"

"You've said something," he replied.

"Do you borrow any money from your bank?" we asked.

"Certainly," he replied. "All business men do, who can."

"What are you paying now?" we asked.

"I paid seven per cent for last I got," he said. "I borrowed ten thousand dollars for three months."

"How did you charge off the one hundred and seventy-five dollars paid for discount?" we asked.

"Why, I charged it to overhead," he replied.

"And what did you charge your overhead to?" we asked.

"Why, I distribute that in my gross profit," he said. "My customers pay it."

Then we asked him why he had to borrow money and he told us because some of his customers were slow pay.

"Then as a matter of fact," we said, "customers who pay their bills promptly pay part of the overhead created by those who do not pay."

"That's true," he said, "but business has to be done that way."

"That's where you make a mistake," we replied. "Business does not have to be done that way and a business that is done that way won't prosper because it isn't built on the solid rock of justice."

"Because we, too, have to borrow money we have to pay interest. This interest has to be charged. If we charged it to overhead, the man who pays his bills promptly would be paying for favors extended to the delinquent. This wouldn't be fair, so we ask the man who is slow to pay the interest on our money while he is using it."

"Your bill was due on December first. Because you didn't pay until January first we had to borrow the amount of your bill for thirty days. We simply charged you the interest we paid."

"I guess you are right; in fact, I know you are right," said our visitor. "You won't hear any more from me about interest. I wish I'd considered the subject as you put it before."

### **Who Manufactures or Sells the Burgess Portable Blow Pipe.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Can you furnish us with the name of the manufacturer of the Burgess portable mechanical blow pipe, or with the names of retailers who sell these blow pipes?

MITCHELL-BISSELL COMPANY,  
Trenton, New Jersey, April 13, 1921.

Divinity consists in use and practice, not in speculation.—Luther.

If an article Does Things better, at less cost, it is the best investment that can be made. Its value is not a matter of to-day's dollars, but of Continued Usefulness. Ownership and Added Convenience give More than the few dollars invested.

### **Sells Tools by Advertisement in AMERICAN ARTISAN.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I have sold my tools through the advertisement in your paper. Many thanks.

Yours truly,

J. E. MURRAY,

Charles City, Iowa, April 18, 1921.

### **Notes and Queries.**

#### **Repairs "Clover Leaf" Lawn Mower.**

From Julius Rieth, Lansing, Iowa.

Please tell me who makes the Clover Leaf lawn mower and where I can get repairs for same.

Ans.—F. and N. Lawn Mower Company, Richmond, Indiana.

#### **Mailing Lists.**

From Co-Operative Foundry Company, 505 South Clinton Street, Chicago, Illinois.

We would like to know where we can procure lists of sheet metal shops in different states.

Ans.—Ross-Gould, Tenth and Olive Streets, St. Louis, Missouri.

#### **Molasses Pumps.**

From Satter and Moulton, Leland, Illinois.

Kindly advise us where we can secure pumps suitable for pumping molasses, grade used for stock feeding.

Ans.—M. T. Davidson Company, 154 Nassau Street, New York City; Foster Pump Works, Incorporated, 37 Bridge Street, Brooklyn, New York; Northern Fire Apparatus Company, 2422 Union Avenue, Minneapolis, Minnesota.

#### **Branch Office National Lead Company.**

From F. H. Wirt, 119 South Utica Street, Waukegan, Illinois.

Can you inform me if the National Lead Company of Massachusetts has a branch office in Chicago?

Ans.—900 West 18th Street, Chicago, Illinois.

#### **Brass Wire Strainer Cloth.**

From Fey and Fey, Delavan, Wisconsin.

Will you kindly advise where we can buy forty or fifty mesh number thirty brass wire strainer cloth.

Ans.—W. S. Tyler Company, Cleveland, Ohio; Michigan Wire Cloth Company, 500 Howard Avenue, Detroit, Michigan; Fred J. Meyers Manufacturing Company, Hamilton, Ohio.

#### **"Acorn" Ranges and Furnaces.**

From Kraft Sheet Metal Works, 2136 North Cicero Avenue, Chicago, Illinois.

We would like to know who makes the Acorn ranges and furnaces.

Ans.—Rathbone Sard and Company, Aurora, Illinois; and 1325 South Michigan Avenue, Chicago, Illinois.

#### **Tinners' Supplies.**

From F. H. Wirt, 119 South Utica Street, Waukegan, Illinois.

I would like to know who in Chicago sells tinners' supplies.

Ans.—Carr Supply Company, 412 North Dearborn Street, Chicago, Illinois; John Johnston and Company, 311 W. Lake Street, Chicago, Illinois.

#### **Roofing Cement.**

From Dubuque Radiator Works, 1255 Clay Street, Dubuque, Iowa.

Will you please inform us who carries roofing cement for patching tin roofs?

Ans.—Carr Supply Company, 414 North Dearborn Street; Freidley-Voshardt Company, 733 South Halsted Street; both of Chicago, Illinois.



# Illustrations of New Patents

*Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.*

1,368,539. Gutter Hanger Circle. Matthew Russell Berger, Philadelphia, Pa. Filed May 25, 1920.

1,368,580. Wrench. Ernest E. Sievert, Manistee, Mich. Filed Aug. 12, 1920.

1,368,625. Blowtorch. Emil J. Good, Canton, Ohio. Filed June 26, 1919.

1,368,638. Holder for Saw Blades. William J. McQuillan, Pittsburgh, Pa. Filed May 29, 1919.

1,368,660. Ironing Board. Albert R. Simpson, Dorchester, Nebr. Filed Feb. 18, 1920.

1,368,693. Safety Razor. George Browning, Grand Rapids, Mich. Filed Nov. 13, 1916.

1,368,698. Saw Set Dressing Tool. Edward G. S. Clare, Seattle, Wash. Filed Dec. 20, 1919.

1,368,709. Stovepipe Holder. Arthur English, Kankakee, Ill. Filed Feb. 18, 1920.

1,368,719. Magazine Catch and Release for Firearms. Grant Hammond, New Haven, Conn., assignor of one-third to Alva C. Washburne, Pittsfield, Mass., and one-third to Frederick G. Crane, Dalton, Mass. Filed Feb. 28, 1918.

1,368,742. Metal Lath Attaching Clip. Harry M. Naugle, Canton, Ohio. Filed May 17, 1920.

1,368,754. Clothesline Fastener. Ferdinand C. Reinhard, West Pittsburgh, Pa. Filed Dec. 5, 1919.

1,368,767. Insect Trap. Ida Smedberg, Chisago City, Minn. Filed Apr. 12, 1919.

1,368,801. Wrench. John Jaros, Oklahoma, Okla. Filed Nov. 3, 1919.

1,368,805. Clothesline Clamp. William Austin Johnson, Fairmont, W. Va. Filed Mar. 2, 1920.

1,368,839. Clothesline Attachment. Arthur H. Richards, Wilkes-Barre, Pa. Filed Nov. 24, 1919.

1,368,873. Positive Pressure Release for Clothes Wringers. Rea P. Wright, Washington, D. C. Filed Apr. 16, 1918.

1,368,876. Rule. Isaiah J. Allen, Portland, Oreg. Filed July 19, 1919. Renewed July 12, 1920.

1,368,900. Wrench. Edwin W. Cochran, Catawba, N. C. Filed June 3, 1919.

1,368,914. Razor. Donald Alonzo Fenwick, Bisbee, Ariz. Filed Feb. 11, 1920.

1,368,939. Artificial Trolling Bait. Louis P. Kelley, Center Harbor, N. H. Filed Mar. 2, 1920.

1,368,961. Underreamer. Gustavus A. Montgomery, Dallas, Tex., assignor of one-half to The Guiberson Corporation, Dallas, Tex., a Corporation of Delaware. Filed June 7, 1920.

1,368,966. Pipe Wrench. Welker V. Ooley, Linby, Iowa. Filed July 16, 1920.

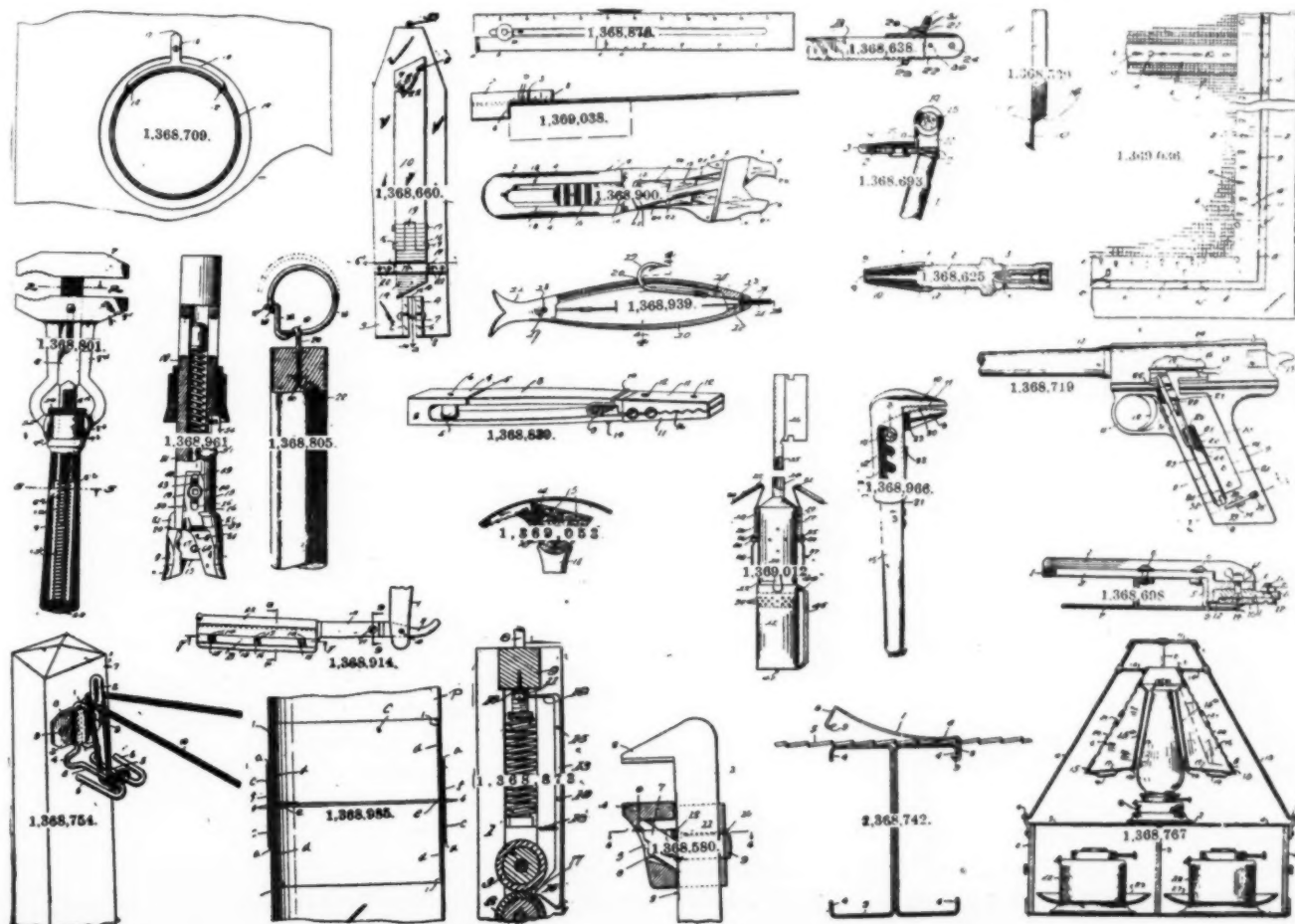
1,368,985. Pipe Coupling. Isaac R. Storie, Jamestown, Tenn. Filed May 7, 1920.

1,369,012. Combination Shaving Set. Peter Dynowsky, Newark, N. J. Filed Sept. 15, 1920.

1,369,036. Screen Fastener. Horace McCaffrey, Maconnell, Redstone, Mont. Filed Oct. 22, 1919.

1,369,038. Try Square Handle. George Edward Dallas, Tex. Filed June 10, 1920.

1,369,053. Ice Cream Freezer. Frank Gettys Scott, Tulsa, Okla. Filed July 25, 1918.



# Weekly Report of the Markets

*General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.*

## **STABILIZING OF PRICES GOES ON IN STEEL TRADE.**

Some disappointment is felt by the smallness of the long-awaited price reductions of the leading interest.

What is the immediate effect of the stabilization of the market on a common price level, is the question now asked.

In the first place, the corporation has unfilled orders amounting to more than 6,000,000 tons, while the independents are operating on what few orders they can pick up from day to day.

In the second place, the leading interest has kept the good will of most of its customers by selling them steel products during the greater part of 1920 and 1919 at far lower prices than the independents charged.

In the third place, the drastic curtailment in operation at the plants of the steel corporation was due to the withholding of specifications against existing contracts by customers who anticipated lower prices because the independents had reduced prices.

Now that lower quotations have been made, which are on a par with those of the independents, it is fair to presume that specifications against orders will be released and that the output of the corporation's mills, which had fallen to 35 per cent, from well over 90 per cent, at the beginning of the year, will increase rapidly.

It is also fair to presume that if the corporation again gets the lion's share of the country's business, the independents will again drop prices which will necessitate a further cut by the corporation.

The one factor against this is the ruinous freight rates still in force which have caused the independents to lose money at the recent low prices quoted on many products.

If freight rates decline, and they surely must, then the independents will again be in a position to start another price war.

All eyes are now turned to the future wage policy of the leading interest. Last year, according to the annual report of the corporation, it paid out in wages alone, some \$40 per ton on all steel manufactured and sold.

At the new price levels some of the products are now selling at \$40 a ton, and an early cut in wages is imperative to avert an enormous loss.

President Tighe, of the Amalgamated Association of Iron, Steel and Tin Workers, recently stated that an attempt to unionize the steel industry would be made next June, but steel manufacturers are giving it scant attention.

Half the steel workers are out of employment, and the last steel strike was a dismal failure. The United States Steel Corporation is non-union throughout, and intends to maintain the open shop policy. So far the corporation has denied any intention of cutting wages.

## **Steel.**

The National Tube Company, the pipe subsidiary of the leading interest, has issued a new card on boiler tubes. This card shows reduction of 6 points on 2 and 2¼ inch tubes, 10½ points on sizes 2½ to 3 inch and 6½ points on tubes ranging from 3 1/3 to 13 inches. The 1¾-inch size remained unchanged.

In less than car lots the basing discount is now 43 per cent, as compared with the Industrial Board, March, 1919, discount of 36½ per cent.

Lists are being prepared on oil country goods which show price reductions of approximately \$10 per ton on sizes 6 inches and under and of \$8 for the larger sizes. Line pipe discounts have been increased by 5 points on 6-inch and under and 4 points for larger sizes.

An important development among the independent makers of wrought iron pipe is that the prices recently announced, while lower than those formerly quoted, are still higher than the Industrial Board schedule of March, 1919.

The recent reduction in prices by the leading interest and the partial equalization of the market has closed quite a large tonnage of tentative orders and the rate of operations of the steel mills throughout the country has increased somewhat.

The tonnage booked will not maintain the increased rate of operation for long, but the trade is hoping that the public in general is satisfied that the process of deflation has been completed and will now take hold and buy.

## **Copper.**

Domestic consumers of copper are showing more interest in future positions, there being inquiries in the market for about 10,000,000 pounds of electrolytic, half of which is for one interest.

The Western Union Telegraph Company which has put out inquiries several days ago for 3,000,000 pounds, is understood to have been purchased for third quarter shipment, including some deliveries the latter part of May.

Another domestic consumer is understood to have bid 12.75 cents delivered for 5,000,000 pounds for future shipments, but this price was refused, there being no sellers for shipment beyond June, under 13 cents and for third quarter shipment, large producers are asking an average of 13.25 cents delivered.

Wire drawers are also testing the market for several 1,000,000 pound lots for June and later shipment. Sales of several million pounds of lake copper made by the Calumet & Hecla Company to Germany at close to electrolytic prices were put through several weeks ago.

Copper and brass products plants report a slightly better rate of operation. It is understood that taking



them as a whole throughout the country the rate is some 10 per cent higher at between 40 and 50 per cent of capacity.

### **Tin.**

The latest rumors are that up to the present the Ways and Means Committee of Congress has in mind a 4 cents per pound duty on tin, but no rumors as to whether a margin of protection is to be given to the American smelters of Bolivian ores.

At the best it is estimated that the tariff bill may not be introduced until early June and if it passes and goes into effect by August 1st it will be very much quicker than has been the experience of former general tariff bills.

So far the fears of a duty have not influenced buyers' actions to any extent.

An advance of  $1\frac{1}{2}$  cents has taken place in Chicago prices of tin. Pig tin has increased from  $32\frac{1}{4}$  cents to  $33\frac{3}{4}$  cents per pound and bar tin from  $34\frac{1}{4}$  cents to  $35\frac{3}{4}$  cents per pound.

### **Lead.**

Settling prices in St. Louis are unchanged at 4.20 but the Chicago price is 15 points higher at 4.50 cents a pound.

Producers are asking 4.30 St. Louis deliveries but buyers are not willing to pay as high as this yet.

The leading interest continues to quote 4.10 for St. Louis and 4.25 for New York. There were 1,200 tons of lead received from Mexico Tuesday of this week.

There was a stiff demand for lead ores in the Joplin district and prices held firm on the \$47.50 basis and sellers anticipating a further advance are slow to accept orders.

High grade sulphide ore is quoted at \$46.30 and the 80 per cent grades at \$47.50.

### **Solder.**

No further changes have occurred in Chicago prices of solder. The quotations now in effect are as follows: Warranted, 50-50, per hundred pounds, \$21.25; Commercial, 45-55, per hundred pounds, \$19.75; Plumbers', per hundred pounds, \$18.50.

### **Zinc.**

Producers of zinc advanced their asking prices for St. Louis deliveries Tuesday, April 19th,  $2\frac{1}{2}$  points to  $4.67\frac{1}{2}$  cents a pound without eliciting any bids from buyers. The nominal New York price is still 5 cents. The St. Louis settling price is put at  $4.62\frac{1}{2}$  cents.

Chicago prices advanced 10 points, from \$5.15 to \$5.25 per hundred pounds.

### **Sheets.**

There is no evidence whatever of any disposition on the part of any of the sheet mills to shade the new prices announced by the American Sheet & Tin Plate Company last week.

Whether these prices will eventually be shaded by any of the independents remains to be seen, but it can be reported that nothing has developed thus far, and it is an undoubted fact that after recent experiences with price cutting the independent mills are all strongly in mood at present to maintain whatever price is commonly recognized as the market.

Not enough has occurred thus far to indicate what

volume of business may be expected to come out under the new conditions.

The independents have a moderate volume of business on books now, taken at the recent prices, below those now ruling, and all this business is sound so that the independents do not need to book more business at once in order to maintain their operations, which have been on an average at about 30 per cent.

As to the leading interest which is operating also at about this rate, it is in line to receive releases as well as specifications against old contracts, now that it has reduced its prices, and the business reported as received in the fore part of the week is described as both satisfactory and promising.

The base price of blue annealed sheets had been reduced in Chicago from \$4.68 to \$4.13 per hundred pounds.

### **Tin Plate.**

No material increase in demand for tin plate is to be observed thus far, since the reduction announced Tuesday, April 12th, in the regular price, from \$7.00 to \$6.25 per base box.

While tin plate buyers had exhibited the attitude of waiting for a reduction in the price, they do not seem to have been ready with orders when the reduction came.

With such a conservative spirit exhibited by buyers, the mills are naturally disposed to fill orders in future from stock as well as they can, rather than increase their output.

In many cases the sizes in stock will fit the prospective orders. Both the leading interest and the independents are understood to be running this week at 30 or 35 per cent of capacity, an unprecedentedly low rate for this date in the year except for last year, when just at this time there was a sharp curtailment on account of the railroad strikes.

In the Chicago market coke plates have been lowered in conformity with new price schedules. For example, 180-pound cokes, 20x28, which were quoted at \$15.90 are now \$14.80. Other weights are in proportion.

### **Old Metals.**

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, \$14.00 to \$14.50; old iron axles, \$24.00 to \$25.00; steel springs, \$12.00 to \$12.50; No. 1 wrought iron, \$10.50 to \$11.00; No. 1 cash, \$14.00 to \$14.50; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 7 cents; light brass, 4 cents; lead, 3 cents; zinc, 2 cents; cast aluminum, 10 cents

### **Pig Iron.**

Production of coke is down to a lower point than it has been in more than 25 years and it can not go much lower unless the entire industry comes to a standstill.

Pig iron has sold as low as \$21 in Birmingham. This was probably a distressed lot, as large tonnages are still held at \$25.

Other sales at \$23 have been reported, but not in sufficient quantity in point of tonnage to quote the market at that level, although the tendency is toward the lower price which ruled not long ago.

# Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS		HARDWARE		Scratch.		BEVELS, TEE.	
<b>FIG IRON.</b>		<b>ADZES.</b>		No. 18, socket Handled .....per doz. \$ 2 50		Stanley's Rosewood handle, new list .....Nets	
Northern Fdy. No. 2.....\$25 70		Carpenters'.		No. 344 Goodell- Pratt, list less.....35-40%		Stanley iron handle.....Nets	
Southern Fdy. No. 2.....33 17		Plumbs.....Per doz. \$29 00		No. 7 Stanley...per doz. \$ 2 25		<b>BINDING CLOTH.</b>	
Lake Sup. Charcoal.....33 50		<b>Coopers'.</b>		<b>AXES.</b>		Zincd .....55%	
Malleable .....27 20		Barton's .....Net		First Quality, Single		Brass .....40%	
<b>FIRST QUALITY BRIGHT TIN PLATES.</b>		White's .....Net		Bitted, 3 to 4 lb., per doz. 16 50		Brass, plated.....60%	
Per Box		Railroad.		First Quality Double		<b>BITS.</b>	
IC 14x20 112 sheets \$12 60		Plumbs.....Per doz. \$30 00		Bitted .....per doz. 22 50		Auger.	
IX 14x20.....14 55		<b>AMMUNITION.</b>		Broad.		Jennings Pattern.....Net	
IXX 14x20.....15 70		Shells, Loaded, Peters.		Plumbs. Can. Pat., 6-lb. 65 00		Ford Car.....List plus 5%	
IXXX 14x20.....16 90		Loaded with Black Powder, 18%		Single Bitted (without handles).		Ford's Ship....." " 5%	
IXXXX 14x20.....18 10		Loaded with Smokeless		Plumbs, 4 1/2-lb.....19 50		Irwin .....35%	
IC 20x28.....25 20		Powder .....18%		Double Bitted (without handles).		Russell Jennings.....plus 20%	
IX 20x28.....29 10		Winchester.		Plumbs, 4 1/2-lb.....23 50		Clark's Expansive.....33 1/2%	
IXX 20x28.....31 40		Smokeless Repeater Grade, 15%		<b>BAGS, PAPER, NAIL.</b>		Steer's " Small list, \$22 00..5%	
IXXX 20x28.....33 80		Smokeless Leader Grade...15%		Pounds .. 10 16 20 25		" " Large " \$26 00..5%	
IXXXX 20x28.....36 20		Black Powder.....15%		Per 1000..\$5 00 6 50 7 50 9 00		Irwin Car.....35%	
<b>COKE PLATES</b>		U. M. C.		<b>BALANCES, SPRING.</b>		Ford's Ship Auger pattern	
Cokes, 180 lbs.... 20x28 \$14 80		Nitro Club.....18%		Sight Spring.....Net		Car .....List plus 5%	
Cokes, 200 lbs.... 20x28 15 00		Arrow .....18%		Straight .....Net		Center .....10%	
Cokes, 214 lbs....IC 20x28 15 35		New Club .....18%		<b>BARS, WRECKING.</b>		Countersink.	
Cokes, 270 lbs....IX 20x28 17 50		Gun Wads—per 1000.		V. & B. No. 12.....\$0 45		No. 18 Wheeler's..per doz. \$2 25	
<b>BLUE ANNEALED SHEETS.</b>		Winchester 7-8 gauge 10&7 1/2%		V. & B. No. 24.....0 75		No. 20 " " " 2 00	
Base.....per 100 lbs. \$4 13		" 9-10 gauge 10&7 1/2%		V. & B. No. 32.....0 80		American Snailhead " 1 75	
<b>ONE PASS COLD ROLLED BLACK.</b>		" 11-28 gauge 10&7 1/2%		V. & B. No. 30.....0 85		" Rose " " 2 00	
No. 18-20.....per 100 lbs. \$5 20		<b>Powder.</b> Each		V. & B. No. 330.....0 90		" Flat " " 1 40	
No. 22-24.....per 100 lbs. 5 25		DuPont's Sporting, kegs..\$11 25		<b>BASKETS.</b>		Mahew's Flat " " 1 60	
No. 26.....per 100 lbs. 5 30		" 1/4 kegs 3 10		Clothes.		" Snail " " 1 90	
No. 27.....per 100 lbs. 5 35		DuPont's Canisters, 1-lb.. 55		Small Willow...per doz. \$15 00		Dowel.	
No. 28.....per 100 lbs. 5 40		" kegs.. 22 00		Medium Willow. " 17 00		Russel Jennings.....plus 20%	
No. 29.....per 100 lbs. 5 50		" 1/4 kegs 5 75		Large Willow... " 20 00		<b>Gimlet.</b>	
<b>GALVANIZED.</b>		Hercules "E.C." kegs.....22 50		Galvanized. 1 bu. 1 1/2 bu.		Standard Double Cut Gross \$3 40	
No. 16.....per 100 lbs. \$5 65		Hercules "Infallible," 25-can		Per doz.....\$16 08 \$18 72		Nail Metal Single	
No. 18-20.....per 100 lbs. 5 80		drums "Infallible," 10-can		<b>BEATERS.</b>		Cut .....Gross \$4 00—\$5 00	
No. 22-24.....per 100 lbs. 5 95		drums .....9 00		Carpet. Per doz.		<b>Reamer.</b>	
No. 26.....per 100 lbs. 6 10		Hercules "E.C." and "Infal-		No. 7 Tinned Spring Wire..\$1 10		Standard Square.....Dox. \$2 50	
No. 27.....per 100 lbs. 6 25		libre," canisters.....1 00		No. 8 Spring Wire Cop-		American Octagon... " 2 50	
No. 28.....per 100 lbs. 6 40		Hercules W. A. 30 Cal. Rifle,		pered .....1 50		<b>Screw Driver.</b>	
No. 30.....per 100 lbs. 6 90		canisters .....1 25		No. 9 Preston.....1 75		No. 1 Common.....20	
<b>BAR SOLDER.</b>		Hercules Sharpshooter Rifle,		<b>EGG.</b> Per doz.		No. 26 Stanley.....75	
Warranted,		canisters .....1 00		No. 50 Imp. Dover.....\$1 10		<b>BLADES, SAW.</b>	
50-50.....per 100 lbs. \$21 25		<b>ANVILS.</b>		No. 102 " " Tinned 1 35		Wood.	
Commercial,		Solid Wrought...23 & 23 1/2c per lb.		No. 150 " " hotel 2 10		Diston 30-in.	
45-55.....per 100 lbs. 19 75		<b>ASBESTOS.</b>		No. 10 Heavy hotel tinned 2 10		Nos. ....6 66 26	
Plumbers'.....per 100 lbs. 18 50		Paper up to 1/16.....10c per lb.		No. 13 " " " 3 30		\$9 46 \$10 05 \$9 45	
<b>ZINC.</b>		Millboard 3/32 to 1/4...10 1/2c per lb.		No. 15 " " " 3 60		<b>BLOCKS.</b>	
In Slabs.....\$5 25		Corrugated Paper (250		No. 18 " " " 4 50		Wooden .....20%	
<b>SHEET ZINC.</b>		sq. ft.).....\$6.50 per 100 lbs.		<b>Hand.</b>		Patent .....20%	
Cask lots.....13c		Rollboard .....11c per lb.		8 9 10 12		<b>BOARDS.</b>	
Less than cask lots.....13 1/4-13 1/2c		<b>AUGERS.</b>		Per doz.\$11 50 13 00 14 75 18 00		Per doz.	
<b>COPPER.</b>		Boring Machine.....40@40&10%		<b>Moulders'.</b>		24x24 .....\$13 65	
Copper Sheet, mill base...\$0 20		Carpenter's Nut.....50%		12-inch .....Per doz. 20 00		26x26 .....16 05	
<b>LEAD.</b>		Hollow.		<b>BELLS.</b>		28x28 .....18 85	
American Pig.....\$4 65		Bonney's.....per doz. \$30 00		Call.		30x30 .....21 30	
Bar .....5 40		Post Hole.		3-inch Nickeled Rotary Bell.		32x32 .....25 50	
Sheet.		Iwan's Post Hole and Well...30%		Bronzed base...per doz. \$5 50		36x36 .....30 50	
Full colls....per 100 lbs. \$7 75		Vaughan's, 4 to 9 in.		Cow.		Wash.	
Cut colls....per 100 lbs. 8 00		.....per Doz. \$14 09		Kentucky .....30%		No. 760, Banner Globe	
<b>TIN.</b>		Ship.		Door. Per doz.		(single) .....per doz. \$5 25	
Pig tin.....33 1/2c		Ford's .....Net		New Departure Automatic \$7 50		No. 652, Banner Globe	
Bar tin.....35 1/2c		<b>AWLS.</b>		Rotary.		(single) .....per doz. 6 75	
		Brad.		3 -in. Old Copper Bell... 6 00		No. 801, Brass King, per doz. 8 25	
		No. 3 Handled...per doz. \$0 65		3 -in. Old Copper Bell,		No. 860, Single—Plain	
		No. 1050 Handled " 1 40		fancy .....8 00		Pump .....6 25	
		Patent asst'd, 1 to 4 " 85		3 -in. Nickeled Steel Bell 6 00		<b>BOLTS.</b>	
		Harness.		3 1/2-in. Nickeled Steel Bell 6 50		Carriage, Machine, etc.	
		Common .....1 05		<b>Hand.</b>		Carriage, cut thread, 1/2x6	
		Patent .....1 00		Hand Bell polished List plus 15%		and sizes smaller and	
		Peg.		White Metal.....15%		shorter .....40-10%	
		Shouldered .....1 60		Nickel Plated.....5%		Carriage sizes larger and	
		Patented .....75		Swiss .....10%		longer than 1/2x6.....40-5%	
				<b>Miscellaneous.</b>		Machine, 1/2x4 and sizes	
				Church and School, steel		smaller and shorter...50-10%	
				alloys .....30%		Machine, sizes larger and	
				Farm, lbs. 40 50 75 100		longer than 1/2x4.....50%	
				Each ....\$3 00 3 75 5 50 7 25		Stove .....65-10%	
						Tire .....50%	
						<b>Mortise, Door.</b>	
						Gem, iron.....5%	
						Gem, bronze plated.....5%	